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Research Article

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Cell mediated immunity dysfunction retrival using the extracts of the plant *Cassytha capillaries* (meissen)

Abstract

The growing incidence of infectious diseases, autoimmune problems and tumour formation are due to the weakness/dysfunction of immune system. Many xenobiotic components that enter human system through food, air and food chain interferes with the functioning of cells and secretions that offer immunity. Pesticides that are being indiscriminately applied get into the human system had been reported to affect the functioning of immune system. To validate this information, in the present study of commonly used organophosphorus pesticide quinolphos was administered to Swiss albino mice and the functioning of cell mediated immunity was measured using the parameter Delayed Type Hyper Sensitivity Reaction (DTH) using sheep red blood cells as a challenging antigen. The pesticide induced a reduction in DTH response. So to improve the DTH dysfunction remedial measures were tried using Standard immune boosting drugs and the extract of a plant *Cassytha capillaries*. The remediating agents were found to retrieve the lost immunity to a significant level.

Keywords: immunity, immunity booster, natural products, DTH, *cassaytha capillaries*

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Introduction

Cell mediated and antibody mediated defensive mechanism in the immune system protects the body against the invasion of infectious and opportunistic microorganisms and spontaneously arising Neoplasm.[1-4]

As pesticides are extensively used in farming and insect control, it has every chance to get in to the human body through food, water, air and food chain.[5] In the human system pesticide molecules interferes with immunity.[4] To protect the immune system and its functioning, although immunity booster drugs are available, less information is available on safe immunity protective natural products. Hence in the present study an investigation is made to find out the effect of an organophosphorous pesticide on Delayed Type Hyper Sensitivity reaction (DTH) an expression of cell mediated (CMI) immunity and retrival of immunity dysfunction using the extract of the plant *Cassytha capillaries*. The outcome of the study will help to develop immunity enhancing natural products.

Materials and methods

Extraction of phytochemicals from the plant c. capillaries

For the present study a parasitic twinner plant *Cassytha capillaries* (Meissen) was collected from trees in Western Ghat region of Tamil Nadu. The whole plants were shade dried and powdered when dried. The dried powder was used to take extract using the solvent methanol in Soxhelet apparatus. The extract was dried, purified and stored.

Selection of pesticide

Organophosphorous pesticide Quinolphos was chosen. Using Standard methods LC 50 value was fixed. From this LC 50 value a sub lethal dose of 0.1ppm was chosen for the immune suppression studies. The sub lethal dose was dissolved in water and given to the animal through oral route. Weighed quantity of the extract was dissolved in sterilized distilled water, and three concentrations were prepared, viz., 50, 100 and 200mg/kg/day. The plant extract dissolved in water was fed to the mice along with drinking water using a special feeding bottle Quinolphos (Organophosphorous pesticide 0.1ppm) was used as immune–suppressant drug. Proimmu (Envin Bioceuticals, Shorapur, India was used as standard immune potentiating drug).

Antigen (SRBC) preparation

Cellular antigens such as sheep erythrocytes were obtained from fresh blood of sheep sacrificed in the local slaughter house. Sheep blood was collected into Alsevier's solution and stored. Sheep red blood cells (SRBC) were prepared by washing sheep blood in Alsevier's solution thrice by centrifuging at 3000rpm for 10minutes. Packed volume of SRBC is re-suspended to get a concentration of 0.1ml containing 1×10^8 cells for immunization and challenge.

Selection of experiment animal

For the experiments, Swiss albino mice (age 45–60 days) were selected. The mice were fed regularly with water and pellet feed.

Delayed hyper sensitivity response (DTH) assay

SRBC challenge: DTH assay was carried out using Sheep Red Blood Cells (SRBC) as challenging antigen. DTH response in control, standard immune booster drug administered, immunity, suppressed and natural product given mice was determined using the method described by Agarwal et al.

Mice were divided in to eight groups each group containing six mice. Drugs were given to various groups i.e.

Group I   - Control

Group II   - IV Plan extract given (dose levels of 50mg/kg, 100mg/kg and 200mg/kg)

AGRO WASTE OF *ZIZYPHUS JUJUBA* EXTRACT-MEDIATED SYNTHESIS OF SILVER NANOPARTICLES AND ITS ANTITERMITE ACTIVITY

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ABSTRACT

The present study deals with a cost effective and eco-friendly approach for green synthesis of silver nanoparticles (Ag NPs) using seed aqueous extract of *Zizyphus jujuba* as capping and stabilizing agent. Observations of nanoparticles under UV-visible spectrophotometer were promising and rapid production of surface plasmon resonance was observed at 426 nm. XRD pattern suggests the formation of crystalline particles with face centered cubic (fcc) structure. FTIR spectroscopy peak at 1384.1 cm^{-1} corresponds to C-N stretching of aromatic amine group. SEM showed spherical, aggregated shaped NPs with an average size of 42.1nm. EDAX analysis confirmed the presence of elemental metal signal. AFM analysis showed the irregular surface morphology and the presence of both individual and agglomerated nanoparticles. Anti-termitic activity was investigated using varying concentrations of aqueous seed extract of *Z. jujuba*, AgNO$_3$ solution and synthesized Ag NPs by no-choice bioassay test for 24 h. In the present study, the efficacy of the aqueous seed extract of *Z. jujuba* and green synthesis of Ag NPs is a simple, cost-effective and eco-friendly approach to control the *C. formosanus*.

KEYWORDS: Silver nanoparticles, *Zizyphus jujuba*, XRD, *Centrocestus formosanus*, AFM analysis.

INTRODUCTION

Silver nanoparticles (Ag NPs) were synthesized by several physical, chemical and biological methods. Such nanoparticles possess unique electrical, optical as well as biological properties and are thus applied in catalysis, biosensing, imaging, drug delivery, nano device fabrication and in medicine.[1] The use of plant extract for the synthesis of nanoparticles is advantageous over other environmentally benign biological processes as it eliminated the elaborate process of maintaining cell cultures. The green synthesis of various plants have been reported, the potential of plants as biological materials for the synthesis of nanoparticles are yet to be fully explored.[2]

The most common method of synthesizing silver nanoparticles is chemical reduction, where the silver nanoparticles are synthesized as colloidal dispersions in water or organic solvents.[3] The chemicals that are widely used as reductants for chemical synthesis of silver nanoparticles are ethylene glycol[4], sodium citrate[5] and sodium borohydride.[6] The synthesis of silver nanoparticles by alternate methods using biological systems like bacteria, fungi and plants has increased owing to the environmental concerns.[7] The green synthesis method should concern the utilization of non-toxic chemicals, environmentally benign solvents and renewable materials.[8]

Bio-inspired approaches were explored in the Ag NPs synthesis using aqueous seed extract of *Macrotyloma uniflorum*[9], *Syzygium cumini*[10], *Medicago sativa*[11] and *Jatropha curcas*[12] have been reported by many authors (Table 1). Termites are highly destructive polyphagous insect pests, which largely damage house hold materials, finished goods, plants and agricultural crops such as sugarcane, millet, barley and paddy.

Global Scientific JOURNALS

DYEING OF TRADITIONAL FIBRE MATERIALS USING RUBIA CARDIFOLIA (L) DYE WITH VARIOUS MORDANTS

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1. Introduction

The ability of production natural dye is one of the oldest identified to man and dates to the dawn of evolution. It was used for colouring of fabrics and other materials including traditional craft works [1]. The natural dyes are derived from plants, animals, insects, and the minerals [2, 3]. The ancient peoples are used natural dyes for painting, dyeing of mud pot, dyeing of temple tower, etc. In India, the drama actors using natural dyes for in makeup dyes.

Beginning of the 19th century, the development synthetic dyes was completely eradicating the natural dye usage. But these synthetic dyes are not eco-friendly [4]. It may cause many ill effects on human and other organisms. So the recent days return back to the natural dyes usage. The natural dyes applied products are very expensive for their biological properties [5].

The natural fibres are a plant fibres obtained from various plant parts. In example Palmyra leaf, korai, banana screw pine, sisal, and pineapple leaf etc., used as fibre to make various traditional craft works. The child toys, mat, dress materials, jewellery and other house usage products are made by using these natural fibres. These products are dyed by synthetic dyes generate may cause ill effects to the children's [6].

The present study elaborated to the preparation of natural dye from *Rubia cardifolia* (L) plant roots and dyeing of Palmyra leaf, korai grass, banana, screw pine, sisal, and pineapple leaf fibres with the help of various mordants.

2. Materials and Methods

2.1. Materials

The powdered *Rubia cardifolia* root material was purchased from ayurvedic shop from Kanyakumari district, Tamilnadu, India. The mordants, salt, sodium bi carbonate (soda salt), tin, oxalic acid, tannic acid, ferrous sulphate (Iron), and potassium alum were purchased from merk, India. The tamarind collected from local shop. Natural fibres like palmyra leaf, korai grass, sisal, banana, screw pine, and pine apple fibres were collected from local traditional craft workers in Nagerkoil, Tamilnadu, India.

2.2. Extraction of natural dye

The collected dye material was used to prepare the natural dye using hot extraction method. 200g of dye source was mixed with 1000mL water. Then this mixture was heated at 90°C for 30 minutes. Finally it was filtered using Whatmann No. 1 paper.

2.3. Preparation of Natural fibres

Before dying, the natural fibre materials were soaking in the soft water.

2.4. Preparation of mordants

Sodium chloride: 0.5g of NaCl was dissolved with 10mL of water.

Sodium bi carbonate: 0.5g of $NaHCO_3$ was dissolved with 10mL of water.

Oxalic acid: 0.5g of $C_2H_2O_4$ was dissolved with 10mL of water.

Tannic acid: 0.5g of $C_{76}H_{52}O_{46}$ was dissolved with 10mL of water.

Ferrous sulphate: 0.5g of $FeSO_4.7H_2O$ was dissolved with 10mL of water.

Potassium alum: 0.5g of $KAI (SO_4)_2.12H_2O$ was dissolved with 10mL of water.

Anti Oxidant Role of Selected Medicinal Plants

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1. Introduction

Medicinal plants were nature's priceless gift to human. The development in the field of modern medicine temporarily subdued the traditional herbal Medicine. But today herbal medicine renaissance is blooming across the world. Green medicines are healthier, safer and harmless than synthetic ones. The traditional medicine is accepted as an alternative form of health care (Kumar et al., 2015).

Herbal remedies represent one of the most important fields of traditional medicines ' In rural areas ,ethnomedicine is practiced by large group of people for the treatment of several physical , physiological and social ailments(Swarnkar ,et al.,2009).Hence there is an urgent need to search new compounds from plant extracts .In the present study, two plants were chosen viz., ,Withania somnifera and Emilia sonchifolia to find out their efficacy in curing male infertility through their antioxidant properties..

Withania somnifera

Withania somnifera (L) is a small , erect evergreen woody shrub that grows up to a height of 1-m and belongs to the family of Solanaceae).This plant is cultivated in India, Bangladesh, South Africa, Congo, Moroco, Jordan, Pakisthan and Afganistan. The plant is reported to have many chemical and pharmacological properties .Hence it is widely used as therapeutic agents in Ayurvedic and Unani systems for treatment(Chopra,1994).

In Ayurveda, *Withania somnifera* (Ashwakanda) is widely claimed for having potent aphrodisiac, rejuvenative, sedative and life prolonging properties. Ayurvedic practitioners are using this plant traditionally to promote youthful vigour, strength, endurance and health. It increases the production of vital fluid, blood, lymph, muscle fat, semen and cells,. (Bhattacharyaand Muruganandam ,2003).

W.somnifera also act as an immunosuppressive agent for the inflammatory disease (Devi ,1996 and Bhattacharya et al., 2000,2001, 2002).Hence the plant deserves attention as herbal therapy to ease or even eliminate many of today's common health problems.

Emilia sonchifolia

Emilia sonchifolia is an annual herbaceous plant which is found mainly in tropical and sub tropical countries and in India and other countries of Asia. E.*sonchifolia* commonly known as Heranakhuri in Hindi belongs to Asteraceae Family. E.*sonchifolia* is a tuberulous slender herb growing 30-40 cm height. It is edible and used as a salad before flowering. Stem and leaves are cooked and eaten as vegetable. E.*sonchifolia is* reported to have anticancer property, anti inflammatory and antioxidant activity. Many studies revealed that the plant contains alkaloids, flavonoids and terpenoids (Shen et al., 2012).Hence this plant is being used in Ayurvedic system of medicine for the treatment of various diseases (Sophia et al,. 2011).

Medicinal plants and male infertility

Recent time's nutrition research on dietary antioxidants and its effects on human health have become a major interest. The synthetic antioxidant leaves a lot of side effects. Many herbals and medicinal plants are powerful antioxidants, due to the presence of phenolic bioactive compounds (Gadallah, 2018). Free radicals are formed as a result of adenosine tri phosphate (ATP) production by mitochondria, when the cells use oxygen to generate energy. Free radicals are generally called as Reactive Oxygen Species (ROS).Based on concentrations they are classified into lower, moderate and high levels. Lower and moderate levels exert beneficial effects in cellular response and immune function (High concentration of ROS generates oxidative stress and damages all cell structure), (Aitken ,1989)

Male infertility is associated with various anatomical abnormalities, environmental factors, life style disorders, inflammation and urino-genital trauma in male reproductive system and oxidative stress (Agarwal *et al.,* 2014). Mammalian spermatozoa membranes are very sensitive to free radical induced damage mediated by lipid peroxidise due its rich poly unsaturated fatty acids component. Reactive Oxygen Species attacks the fluidity of the sperm plasma membrane and the integrity of DNA in the sperm nucleus. Thereby

Bacteriology of Flacherie in *Bombyx mori* L

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ABSTRACT:

Sericulture practice in Tamilnadu is affected by flacherie attack on the mulberry silk worm, Bombyx mori. Bacteria causing flacherie infection were isolated from disease developed silkworm, *Bombyx mori*. Antibiotic sensitivity studies were conducted on the bacterial isolates. In the present study 43 species of bacterial strains were isolated from different organs in flacherie affected silkworms. The total heterotrophic bacterial count was found high in the midgut region, where digestive microbes predominate. The haemolymph and silkglands were found to be the major centres for the high multiplication of bacteria. The antibiogram for the isolates , *Escherichia coli, Staphylococcus aureus, Serratia marcescens, Proteus mirabilis and Enterobacter cloacae* revealed that these organisms had developed resistance to a many antibiotics particularly to Gentamycin.

Key words: ; *Bombyx mori*; Flacherie; sericulture ; antibiogram; antibiotic sensitivity

INTRODUCTION:

The silkworm, *Bombyx mori*, is exposed to number of disease causing microorganisms at different levels, causing the development of disease and mortality. These diseases have been grouped under four major categories, *viz.*, microsporidian, viral, bacterial and fungal. Pasteur(1870) reported bacteria as an etiological agent for silkworm flacherie. Pasteur ascribed the pestilential epizootics among silkworms to t5wo symptomatically different diseases,pebrine and flcherie. Cuboni and Garibini (1890) reported *Bacillus cubonianus* as the causative agent of flacherie. Metalnikov and Chlorine (1928) found *Serratia marcescens* to induce one type of flacherie. In China   Hartman (1931) reported that the bacterium, *Bacillus bombysepticus* cause one type of flacherie. Steinhaus (1949) observed *Bacillus mycoides* and *Bacillus laterosporus* as pathogenic agents for silkworm.Hukuhara (2014) reported that Flacherie is one of the great scourges of sericulture.Karthikairaj et.al., (2013) reported the prevalence of bacterial flacherie in some parts of Tamilnadu and suggested plant remedies for that

Further   a   number   of   bacteria   were   reported   as   flacherie   causing   agents (Selvakumar,2013;Balavenkadasubbiah et al.,2015;Anusha and Bhasker 2016 and Bebitha et al., 2016)). As

In Vitro Cardiac Risk Reduction Bioactive Substance from the Seedlings of *Echinochloa frumentacea* and *Panicum sumantrance*

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Abstract
Drug replacement with appropriate remedies are required to eradicate existing problem in thrombosis. It rectified with partially purified thrombolytic enzyme from the seedling of Panicum sumatrance and Echinochola frumentacea. The cell free extract of P. Sumatrance and E. frumentacea seedling was partially purified by dialysis method and observed 36 and 38 KDa molecular weight protein. The isolated enzyme exhibited optimum blood clotting activity at pH 7 at 30°C. Thrombolytic model used to screen the clot lysis potential of bioactive metabolites and Proteolytic enzyme, extracted seedling. Streptokinase treatment was considered as confirmative and saline water as blank control for this study. The Extracts exhibited a good hemolysis activity and Anticoagulant effect with a maximum activity at 20µl concentration in in-vitro condition.
Keyword: *P. sumatrance, E. frumentacea, Antithrombosis, Cardiac risk, Phytoremedy.*

Introduction

Clotting in blood circulation attack the smooth function of heart it leads to death. Blood clotting is caused different kinds of factors (thrombosis), it increase each year for heart problem. Approximately 1,000,000 patients affected by lung blood clot in USA alone. World Health Organization (WHO) report in 2008[1], 17.3 million people death recorded in every year by cardiovascular diseases (CVDs). Thromboses are evolved due to reaction between the platelets and blood vessels, which leads to cause cardiovascular diseases[2]. Platelets play major role in blood clot, it reduce the cardiovascular integrity. Some time the platelets are imply on pathological progression of atherosclerotic lesions and arterial vascular thrombosis[3]. Aggregation of platelet is developing the uncontrolled activity in arterial thrombosis; it leads to cause the routine function of heart[3]. This kind of diseases is controlled using antiplatelet agents[4]. Development of aspirin is valuable recovery mechanism of ischemic cardiovascular disorders, it develop hemorrhagic activity and top of gastrointestinal bleeding as disadvantages[3].

From plasminogen, plasmin production inititated by thrombolytic drugs, it defend hemostatic as well as target Thrombo emboli are broken down[4]. Plasmin initiated the activity of fibrin, it destruct the blood clot[5]. Phytochemiacal isolated from various plant substances are useful to recovery of coagulant,

Ecology, Environment and Conservation Paper

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ISOLATION AND IDENTIFICATION OF BIOACTIVE PROTEIN FROM FISH BY PRODUCTS

N. Indira, K. Valivittan and P. Dhasarathan

Abstract

The utilization of fish byproducts is an important production opportunity for the fishing and seafood processing industry, as it can potentially generate additional income as well as reduce disposal costs for these materials. A promising anticancer peptide was also obtained from shrimp shells and was shown to significantly inhibit the growth of both colon and liver cancer cells. The fish proteins are isolate from the fish muscles, gas chromatography was done to characterize the proteins extracted from the fish muscles, GC/MS peaks were sorted based on elution times, and averages of peak areas were determined from three replicates. GC-MS analysis showed the presence of 16 bioactive protein compounds in the extract of Cyprinus carpio. Finally results were observed through western blot in which molecular weight of the protein was determined. A distinct protein band with MW of 120 kDA was observed at rockfish muscle protein treated with acid. The identified bioactive compounds have a great potential of antibacterial activity against S. aureus and K. pneumonia and antifungal activity against A.fumigatus.

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Ecology, Environment and Conservation Paper

PHYSICO-CHEMICAL ANALYSIS OF NATURAL WATER SOURCES AT THENGAIPATTINAM, KANNYAKUMARI DISTRICT, TAMILNADU, INDIA

Indira N., Arunthathi R., Valivittan K. and P. Dhasarathan

Abstract

The physico-chemical characteristics are said to play a significant role in the distribution of organisms such as reproduction, and feeding etc. Various physico-chemical and biological processes in the mangals make it a habitat for vast array of organisms, leading to rich biodiversity. Generally fish is considered as a highly protein rich food in relation to vegetable and other animal foods. This fish has a high feed efficiency ratio, but due to its feeding behavior it has bad smells that cause to sell with a lower price. The physico - chemical analysis of water samples was performed by standard methods. The edible freshwater fish Cyprinus carpio are collected from the fish culture pond, the fish are sacrificed by shock treatment, Organoleptic assessment is laid on general appearance, slime formation on the body surface, nature of eye, colour of gills, texture, odour and overall acceptability of the fish is examined followed by the microbial analysis in which the Total heterotrophic bacterial population (THBP) is enumerated in collected fish digestive tract samples. The main parameters which affect the shelf life of the stored fish products are the production form, features of packing material, storage temperature, packing process and machines that are used. Hence, the aim of present study is to develop from common carp (Cyprinus carpio) and to determine the rate and the type of a deterioration process that occurs during the refrigerated and frozen storage using sensory, bacteriological, physical and chemical assessments.

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Research Article

Study on antibacterial activity of phytochemicals obtained from *Aerva lanata*

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Abstract

Objective: Bioactive compounds of aromatic and medicinal plants were showed remarkable activity against bacteria and fungi. **Material and methods:** *Aerva lanata* was extracted in hot extraction method using low polar to high polar solvents and used to screen the preliminary phytochemicals. The extracts were separated by thin layer chromatography method and identified compounds by NMR techniques. The isolated active compounds and extracts antibacterial activity was screened by disc diffusion assay, minimum inhibitory and minimum bactericidal activity assay methods. **Results:** Among the various extracts studied in the present investigation, the ethanol extracts of *Aerva lanata* (leaves) was found to be different secondary metabolites. The study revealed the polarity of the chemical composition of the leaves of *Aerva lanata*. In the present study, the Rf value of compound isolated from *Aerva lanata* by TLC method is given as; three spots from hexane extract (0.13, 0.17, 0.31) and five spots from butanol extracts (0.03, 0.06, 0.90, 0.12, 0.15. The proton NMR spectrum of the compound gave the following compound 2-Decyl-1-tetradecanol. In the case of butanol extract of *A. lanata* showed high antimicrobial activity against all the test pathogens while other extracts showed comparatively moderate activity. The butanol extract (150 µg/ml) of *A. lanata* was showed maximum inhibition 5.8 ± 0.4 mm against *Klebsiella* Sp, 5.1 ± 0.3 mm against *Staphylococus aureus*, 4.5 ± 0.3 mm against *Micrococcus* Sp. and 2.6 ± 0.2 mm against *Pseudomonas* Sp. Followed by butanol, hexane extract (150 µg/ml) showed inhibition of *Staphylococus aureus* (4.8 ± 0.3 mm), *Pseudomonas* Sp (3.7 ± 0.2 mm), *Micrococcus* Sp (3.5 ± 0.2 mm) and *Klebsiella* Sp (3.5 ± 0.3 mm). Lower concentration of 2-Decyl -1-tetra decanol (20 µg/ml) also inhibited *Micrococcus* Sp (10 ± 0.3 mm), *Klebsiella* Sp (9 ± 0.3 mm), *Pseudomonas* Sp (8 ± 0.3 mm) and *Staphylococus aureus* (4 ± 0.3 mm). **Conclusion:** The active compound has good inhibitory effect against the test pathogens and crude extracts. In this study shows isolated active compound of 2-Decyl -1-tetra decanol to be used prepare plant based drugs to cure pathogenic bacterial diseases.

Keywords: Phytochemical analysis, microbial assay, *Aerva lanata*

Introduction

During the Vedic period itself plants were essential part of human society in different aspects such as construction, furniture manufacture, firewood, medicinal values etc (Manjula et al., 2009; Goyal et al., 2011).Mainly plants were used to cure respiratory infections, diarrhea, malaria, bacterial and fungal infections in rural communities of developing countries (Somchit et al., 2003). In traditional methods were used numerous tropical plants which are cure all kind of diseases (Amarnath et al., 2018). Bioactive compounds of aromatic and medicinal plants were showed remarkable activity against bacteria and fungi. It could be an alternate way to combat against pathogenic microbes (Ramasamy and Charles Manoharan, 2004). Hence in the present study was chosen a test plant *Aerva lanata* for screening their medicinal against pathogens.

Aerva lanata is herb, erect or prostrate with a long tap-root, branched from near the base; branches many, pubescent or wolly- tomentose, striate. Leaves alternate, 2-2 × 1-1.6 cm on the main stem, 6-10 x 5-6 mm on the branches, elliptic or obovate, or subotbicular, obtuse or acute, entire, pubescent above, more or less white with cottony hairs beneath; petioles

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Asian Journal of Microbiology, Biotechnology & Environmental Sciences Paper

SCREENING AND IDENTIFICAION OF ACTIVE PHYTOCHEMICALS COMPOUNDS FROM CLITORIA TERNATEA LEAVES

CHRISTINA ISAAC, VALIVITTAN, K. AND P. DHASARATHAN

Abstract

Preliminary phytochemical analysis revealed the presence of secondary metabolites in Clitoria ternatea samples was good. Clitoria ternatea leaves phytochemical screening were performed and recorded in Table 1. Ethanol extracts of Clitoria ternatea (leaves) was found to be different secondary metabolites compared to other solvents. Alkaloids were present in all solvent extracts except in butanol extract. Saponin is present in butanol, ethanol and aqueous extracts and is absent in remaining solvent extracts. Amino acids present in butanol and ethanol extract of Clitoria ternatea and are absent in hexane, chloroform and aqueous extracts. Flavonoids are mostly absent in hexane and chloroform extracts. However, it is found to occur in butanol, ethanol and aqueous extracts of the present study. The study revealed the polarity of the chemical composition of the leaves of Clitoria ternatea. In the present study, the Rf value of compound isolated from Clitoria ternatea by TLC method is given as; three spots from hexane extract (0.13, 0.17, 0.31), five spots from butanol extracts (0.03, 0.06, 0.90, 0.12, 0.15), six spots from ethanol extracts (0.03, 0.08, 0.11, 0.13, 0.17, 0.21), four spots from chloroform extracts (0.13, 0.18, 0.21, 0.33) and three from aqueous extracts (0.80, 0.18, 0.34). The proton NMR spectrum of the compound gave the following compound Octadecanoic acid. It is one unusual base pair present in Clitoria ternatea samples. It is one of the reasons for many of the biological characteristics of the samples. The compound of Clitoria ternatea have been found in vitro to be effective antimicrobial substances against a wide array of microorganisms.

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Anti-Diuretic Impact of *Aerva Lanata* Extracts and their Active Compounds in Furosemide Administered Diuretic Rats

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Abstract

Bioactive compounds of aromatic and medicinal plants showed remarkable activity against bacteria and fungi. Medicinal plants were used to inhibit the pathogens and cure most of the diseases like diuretics, diabetics etc., Hence, in the present study the antidiuretic activity of the *Aerva lanata* was analysed and discussed. In this study, total urine output in normal animals was 1.32 ± 0.22 ml/kg of animal per day, but diuretic animal had 1.76 ± 0.26 ml/kg/day. It was increased to 44% and stimulated the action of diuretic 1.5 fold in this study. Furosemide (Standard diuretic drug) induced percentage secretion of saline was 8.52 ± 0.56 and urine excretion was 7.38 ± 0.53. The active compound of *Aerva lanata* was showed to reduce the remarkable and reach the control value and showed antidiuretic efficiency. Total urine output in diuretic induced animal treated with 2-Decyl -1-tetra decanol was 1.30 ± 0.27 ml/kg of animal per day compared to control (1.32 ± 0.22 ml/kg of animal per day) it was decreased 2% and stimulated the action of diuretic 1 fold. The active compound of *A. lanata*, 2-Decyl -1-tetra decanol induced percentage of secretion of saline was 8.76 ± 0.52 and urine excretion was 7.49 ± 0.48. The standard antidiuretic hormone also showed similar value of active compounds of *Aerva lanata*. From the investigations the *Aerva lanata* is to be used effective cheap plant based drug for diuretic diseases.

Keywords: *Aerva lanata*; Furosemide; Diuresis; Creatine; Urine

Introduction

In the pharmacological analysis, the antibiotics were used to cure diuretics but it created the side effects like increase plasma, changes in edema, hypertension and heart diseases. In earlier days, the diuretics/hypertension was cured with five types of antibiotics. These kinds of antibiotics also affected the glucose level in patients and created side effects. Additionally, there is a concern about excess mortality associated with diuretic therapy and diabetes mellitus. The alcoholic extract of *Aerva lanata* was tested for diuretic activity. Manoj Goyal et al., reported that the alcoholic extract at a dose of 800 mg/kg acted as a diuretic, with respect to control [1].

Anti- Nepharocalcinolysis Study Of Bioactive Compounds Isolated From *Aerva Lanata*

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ABSTRACT - In the present investigation impact of Aerva lanata active compound (2-Decyl -1-tetra decanol) in Ethylene glycol (0.75%) administered urolithiatic animals. Anti-nepharocalcinolysis effect of Aerva lanata was found and recorded. Chronic administration of 0.75% (v/v) ethylene glycol aqueous solution to male albino rats resulted in hyperoxaluria. Oxalate, calcium and phosphate excretion were increased in the calculi-induced (Group II) animals. However, in the present study, supplementation with Aerva lanata extract and Cystone restored oxalate and calcium in urine and kidney in curative regimens and preventive regimens as compared to calculi-treated animals. In calculi-induced rats (Group II), marked renal damage was seen by the elevated serum levels of creatinine, uric acid and Blood Urea Nitrogen (BUN). Administration of extract (100 mg/kg) and cystone (750 mg/kg) showed significant inhibition of lipid peroxide level in rat kidney in both the prophylactic and therapeutic groups. The present results suggest that supplementation with Aerva lanata extract significantly decreased oxalateinduced kidney lipid peroxidation. The present findings confirm the assertions made regarding the effectiveness of the 2-Decyl -1-tetra decanol of A. lanata against urinary pathologies in the Indian folk medicine, i.e. as an antiurolithiatic drug.

Keywords: Aerva lanata, nepharocalcinolysis, urolithiatic animals and ethylene glycol

I. INTRODUCTION

In global level nature bestowed remarkable medicinal properities with medicinal plants. Medicinal plants usage increased 80 % at global level [1]. Human beings suffered most of the dreadful diseases including kidney stones all over the world. Kidney stones were predominantly caused by accumulation of calcium oxalate crystals. About 80 % of the all gall stones be evidence for no symptoms and may continue for years [2]. Cohen *et al.,* [3] reported urinary calculi have been found in the tombs of Egyptian mummies dating back to 4000 BC and in the graves of North American Indians from 1500- 1000 BC. The first documented urinary tract stones were found among the 7000-year-old remains of the pelvic bones of a teenage boy in El-Amara [4]. Urinary stone problem was severely infected large number of people all over the globe. Not only the humans but animals and birds also suffer from the urinary stone problem. The occurrence in some areas is so alarming that they are known as eStone Beltsi [1].

Medical management of nephrolithiasis was high cost or not without side-effects is common [5]. Nephrolithiasis was treatment have serious complications and also impose a great load of costs on the healthcare system [2]. *Aerva lanata* have various pharmacological activities such as antidiabetic, diuretic, anti-inflammatory, antioxidant, diuretic, anti-inflammatory, immunomodulatory, hepatoprotective, antimicrobial and cytotoxicity by various researchers [6, 7, 8]. *Aerva lanata* was considered as the next best alternative Pashanabheda by Ayurvedic practioners in India as it is widely available [9, 10]. The plant is astringent, bitter, cooling emollient, vermifuge, suppurative, diuretic and lithotriptic. It is used to treat boils, cephalagia, cough, strangury, diabetes and lithiasis. Flowers used for removal of kidney stones [11]. *Aerva lanata* aqueous suspension (2 g/kg body wt/dose/day for 28 days) to CaO_2 urolithic rats had reduced the oxalate-synthesizing enzymes, and diminished the markers of crystal deposition in the kidney. The results of the study confirmed that *Aerva lanata* can be used as a curative agent for urolithiasis [12]. The objective of the present study was to investigate and to validate the antiurolithiatic property of *Aerva lanata* extract in experimentally-induced urolithiasis in rats.

In India, 12% of the population is expected to have urinary stones, out of which 50% may end up with loss of kidneys or renal damage. Also, nearly 15% of the population of northern India suffers from kidney stones. Fewer occurrences of urinary calculi are found in southern India, which may be due to regular dietary intake of tamarind

BIOSYNTHESIS OF SILVER NANO PARITICLES FROM THE *CLITORIA TERNATEA* AND ITS ANTIMICROBIAL ACTIVITY

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ABSTRACT

Silver nano particle research plays an important role in modern science for eradicating diseases. The Clitoria ternatea flowers are collected and the Silver nano particle is biosynthesized. The present study was aimed to assess the for its antimicrobial activities. The Clitoria ternatea Silver nano particles, showed antimicrobial activity was evaluated using disc diffusion and minimum inhibitory concentration. The Clitoria ternatea flowers synthesized-AgNPs at different concentration (5, 10, 15 and 20 µl/ml) was tested against Vibrio cholerae and Pseudomonas aeruginosa. Clitoria ternatea flowers synthesized-AgNPs inhibited (MIC) the growth of Vibrio cholerae and Pseudomonas aeruginosa at 20 µl/ml concentrations. the present study provides evidence that Clitoria ternatea flowers extract-AgNPs exhibit interesting antimicrobial properties, expressed either by their capacity to phytochemical compound activity.

Key words: Clitoria ternatea, antimicrobial activity, nanoparticle and minimum inhibitory concnetration.

I. INTRODUCTION

Nanotechnology is one of the most active areas of research in modern materials science. Nanoparticles exhibit completely new or improved properties based on specific characteristics such as size, distribution and morphology [1]. However, there is still need for economic, commercially viable as well environmentally clean synthesis route to synthesize silver nanoparticles [2]. The use of environmentally benign materials like plant leaf extract, bacteria, fungi and enzymes for the synthesis of silver nanoparticles offers numerous benefits of eco-friendliness and compatibility for pharmaceutical and other biomedical applications as they do not use toxic chemicals for the synthesis protocol [3]. The synthesis of noble metal nanoparticles attracts an increasing interest due to their new and different characteristics as compared with those of macroscopic phase, that allow attractive applications in various fields such as antimicrobials [4], medicine, biotechnology, optics, microelectronics, catalysis, information storage and energy conversion [5].

Green chemistry approach emphasizes that the usage of natural organisms has offered a reliable, simple, nontoxic and eco-friendly [6]. Therefore, researchers in the last years have turned to biological systems for nanoparticle synthesis [7]. The bactericidal efficacy of silver-containing polymers is based on the release of silver ions (Ag^+) through interaction with a liquid watery phase [8]. The inhibitory action of silver nanoparticles

Research Paper

Plant Growth Promotion Using Panchagavya

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ABSTRACT

In the traditional agro practice, people have used organic nutrients panchagavya to promote plant growth. In the present, panchagavya was prepared using a modified methodology incorporating tulsi and neem oil along with traditional panchagavya constituents. Different concentration of the prepared panchagavya was tested using the common vegetable crop *Abelmoschus esculentus* (bhendi). The invigoration of the seed germination was found to depend on the soaking duration of panchagavya and its concentration. Growth hormones and bacteria associated with panchagavya were reported to enhance seed germination and growth.

Keywords: Panchagavya, *Abelmoschus* sp, *plant* growth promoter and germination ability.

I. INTRODUCTION

The current interest to produce organically grown vegetables ensures environmental quality maintenance and consumers health protection. As an alternative to chemical fertilizer, organic products like panchagavya are developed and used. The use of organic nutrients for plant growth enhances the quality of the product and sustain shelf life period. [1] Indira et al., [2] reports that the preparation and usage of panchagavya had been reported in vedic literature and such vedic organic agriculture re-enliven natural law in agriculture, bringing the farmer, the process of farming and the environment in complete harmony with each other. Panchagavya preparation varies with the people although the ingredients are common. Panchagavya has been reported to contain micronutrients, macronutrients, many vitamins, essential amino acids, growth promoting factors and beneficial microbes. [3,4] In the present study a novel method of panchagavya was prepared and its efficiency to promote plant growth was tested.

II. MATERIALS AND METHODS

For the present study *Abelmoschus* plant was chosen to find out the efficiency of the panchagavya was developed.

Preparation – materials such as Cow dung, Cow ghee, Cow urine, Cow curd, Cow milk, Banana, Jaggery, Tender ground nut water, Neem oil and Tulsi extract collected for preparation of panchakavya. Fresh cow dung of 1 kg was taken and it was mixed with 100 gm of cow's ghee kept undisturbed for 4 days. After 4 days 600ml of cow's urine and 600 ml of tender coconut water was added and mixed well. After 15 days the following ingredients were added, 400 ml cow's milk, 400ml cow's curd, 200 gm of ripped crushed banana [palayansotan] 100 gm of cane sugar jiggery and 600 ml of water. To this mixture 50 ml of *Ocimum tenuiflorum* [Tulsi] leaf juice and 50 ml of neem oil were added. The contents were mixed well. The entire mixture was prepared in an earthen pot and kept

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Pharmacognostic Studies on Root-bark and fruit of Morinda tinctoria Roxb

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Abstract

Morinda tinctoria commonly known as Indian Mulberry is a species of flowering plant in the family Rubiaceae which plays importa role in traditional medicine. In the present study, the various anatomical characteristics and proximate analysis of root-bark and fr Morinda tinctoria were investigated by the microscopic sectioning using standard pharmacopoeia methods. Microscopic examina of the root-bark indicated the presence of calcium oxalate crystals of raphide bundles in the axial parenchyma. Calcium oxalate crystals were also present in the fruit, either as a 4-lobed druse type or as a spindle shaped Raphide type. Proximate analysis wa carried out to evaluate the plant as a potential source of active compounds which could be served as potent drug or to develop n insecticide against the major pest which involve in crop damage. A lower acid insoluble ash content was recorded for the fruit tha root-bark. Acid insoluble ash value of M. tinctoria fruit (0.510%) shows that small amount inorganic compound is insoluble in acid therefore the fruit may be readily digested and absorbed when consumed.

Keywords

Morinda tinctoria, Microscopic sectioning, Calcium oxalate crystals, proximate analysis, Raphide bundles.

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Cultivation and determination of nutritional value on edible mushroom *Pleurotus ostreatus*

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Abstract

Mushrooms are a good source of protein, vitamins, and minerals and they also posses anti-cancer, anti-cholesterol and anti-tumour properties. Mushroom cultivation is a profitable agribusiness with minimal capital cost. The research experiment was carried out in order to cultivate oyster mushroom (*Pleurotus ostreatus*) using paddy straw and also analyze the nutrient composition by proximate analysis in both fresh and shade-dried mushrooms. The research further focused on polar and non polar compounds present in oyster mushroom by performing GC-MS analysis. Upon analysing the nutrient content in both fresh and shade-dried mushroom, it was found that shade-dried mushrooms have higher energy, protein and carbohydrate value which is higher than the nutritional values obtained from convective drying techniques such as sun drying, oven drying and low heat air blow drying. Fresh *P. ostreatus* mushroom has energy, protein and carbohydrate. The moisture content in fresh mushroom was 89.69% and 12.27% in shade-dried mushroom. The difference in values of crude fibre, total ash and total fats were significantly negligible. This study concludes that energy, and protein values are comparatively higher and carbohydrate value is lesser in shade dried mushroom.

Keywords: *Pleurotus Ostreatus*, proximate analysis, shade-dried, gas chromatography-mass spectroscopy

Introduction

Mushroom is a fungal fruiting body, technically known as sporophore, which lacks chlorophyll and hence cannot produce its own food. Mushrooms usually depend on dead and decaying plants for its food and typically look like umbrellas with a stem (stipe) and a cap (pileus) that reproduces through spores.

Oyster mushroom (*Pleurotus sp.*) is the second most popular mushroom in the world that can be easily cultivated with minimal investment and requirements. Growing oyster mushrooms is easy as they can grow at temperature ranging from 15-30°C and hence can be well grown in both temperate and tropical climatic conditions (Khan *et al.*, 2008) [10]. However nutritional composition is affected by many factors including differences among strains, the composition of growth substrate, the method of cultivation, stage of harvesting, specific portion of the fruiting bodies used for analysis, time interval between harvest and measurement methods (Benjamin, 1995) [4]. Many investigations from different region of the world confirmed that the *Pleurotus* mushroom having highly nutrition and also contains various bioactive compounds including terpenoids, steroids, phenols, alkaloids, lectins and nucleotides, which have been isolated and identified from the fruit body, mycelium and culture broth of mushrooms are shown to have promising biological effects (Lindequist *et al.*, 2005) [8].

Materials and Methods

Spawn Collection

Pleurotus ostreatus spawns grown on sorghum grains were collected from Indian Mushroom Farm, Virugambakkam, Chennai, Tamil Nadu.

Substrate Preparation

Paddy straws were collected from local farmers in Thiruvallur district, in Tamil Nadu. At first, these paddy straws were fresh and green and hence needed pre-treatment prior to use. The bundles were spread over a large surface and dried under sun for 3 days and then turned over and was left to dry for another 4 days. The sun dried paddy straws were later chopped into smaller pieces (length varying from 3-5 cm). These paddy straws were then sterilized chemically by adding formaldehyde and carbendazim along with water in an open tank for 18 hours where the ambient temperature ranges from 37-45°C. Later, the sterilized paddy straws were spread to dry, so that the moisture left over is around 65-70% (less to no moisture on hand after touching the dried paddy straws).

Preparation of Mushroom Bag

Paddy straws were made into cylindrical beds and placed into polyethylene bags sealed on the lower side, having 8-12 pinholes. Spawns grown on corn seeds were then spread over the paddy straw along the inner circle. Then, another layer of cylindrical bed was placed above the first layer and spawns were spread on them again. 5 layers were made in each bag. Later, the mushroom bags were sealed on both sides and were incubated in 20-25°C in dark room for spawn and fructification. Mushroom bags were hanged from rope for quick accessing of fruiting bodies. The humidity of bags inside the room was maintained by spraying water twice every day and also by keeping the floor wet throughout the crop cycle.

After 15-18 days, primordia or pinheads developed, they were further allowed to grow into mature fruiting bodies by optimizing the temperature to 17-20°C. The fully grown

Retrofitting of Reinforced Concrete Structures

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Abstract – *The reinforced concrete structures should have satisfactory performance during earthquakes and other disasters. For this purpose they are being repaired or retrofitted. Repair can lead to increased stiffness, strength, and failure deformation. . A large number of reinforced concrete structures located seismic prone areas are not capable of withstanding earthquake action according to the current codal provisions. Furthermore the seismic behavior of the existing buildings are affected due to design deficiency, construction deficiency, additional loads, additional performance demand, etc. Recent earthquakes have clearly demonstrated an urgent need to upgrade and strengthen these seismically deficient structures. The retrofitting is one of the best options to make an existing inadequate building safe against future probable earthquake or other environmental forces. Retrofitting reduces the vulnerability of damage of an existing structure during a near future seismic activity. This project deals with the inspection and verification of performance of existing structures, selection of the retrofitting methods, choosing the best retrofitting material available and execution for retrofitting. Testing is done for the reinforced concrete beams that are retrofitted by overlaying method using Carbon Fibre Reinforced Polymer (CFRP) to find their strengths and results are interpreted.*

Key Words: Seismic action, loads, Retrofitting, Overlaying method, Carbon Fibre Reinforced Polymer

1. INTRODUCTION

Reinforced Cement Concrete structures are the most abundantly used construction technique in this world. They are often found to exhibit distress and suffer damage, even before their service period is over, due to several causes such as improper design, faulty construction, change of usage of the building, change in codal provisions, overloading, earthquakes, explosion, corrosion, wear and tear, flood, fire, etc. To meet up the requirements of advance infrastructure new innovative materials/ technologies in civil engineering industry has started to make its way. The structures are becoming old and they are in greater need for additional repairs. Retrofitting is defined as the process of modification of existing structures like buildings, bridges, heritage structures to make them more resistant to the seismic activity and other natural calamities.

1.1 Need for Retrofitting

Retrofitting of structures like building, which includes rehabilitation, maintenance and strengthening of the structure, is not only a need in construction and management in urban areas, but also a problem which arises to structural engineers in property management disciplines. It is not financially possible to replace every building that is weakened due to failure of the members, natural disasters or other causes and therefore retrofitting will have an important role in the civil field. Thus this reconstruction method will provide us that extra lifespan for the building and prove beneficial. In retrofitting, the structure must be designed so it is in keeping with its purpose of use and is both safe and durable.

1.2 Benefits of Retrofitting

- Retrofitting is the seismic strengthening of existing damaged and undamaged structure.

- It will be an improvement over the original strength which may be insufficient for the building in the future seismic actions.

- Increasing the global capacity (strengthening). This is typically done by the addition of cross braces or new structural walls.

- Increasing the local capacity of structural elements.

- In retrofitting, the structure must be designed so it is in keeping with its purpose of use and is both safe and durable.

- There are considerable number of buildings that do not meet the requirement of current design standards.

- The serviceability of the structure will increase with retrofitting.

1.3. RETROFITTING METHODS

There are several factors that govern the selection of the retrofitting methods like the existing concrete strength, accessibility to work areas, the extent of damage, cost, etc.

Thus, selecting the right method will vary with each structure.

Ultra High Performance Concrete on Bridges

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Abstract – There is a vast development in construction field , one of the emerging construction in India is bridge construction. Bridge construction reached importance in worldwide level. The most preferred method of super structure in concrete bridge is precast girders with cast insitu slab. Our role of this project is to determine better concrete that withstand more strength, ductility, durability, sustainability, economy & environmental impact of concrete structure. The project deals with introduction of ultra-high performance concrete (UHPC). UHPC is developed using locally available material such as cement, silica fume, steel fibers, super plasticizer, water. It is done with different mix proportion in order to determine suitable mix that satisfies our objective.

Key Words: UHPC, Steel fibers, Silica fume.

I. Introduction

Bridges are constructed in any kind of road network by adopting prestess girder Type Bridge which create greater development in bridge engineering. There are distinct type of bridge according to shape of bridge each of them as unique purpose. I girder bridge are one of the type of bridge which are economical in nature, which are simple to design & it has better efficiency similarly every bridge has unique purpose. Portland cement was first developed in 1824 and few years later, there was a massive developed with addition of metallic reinforcement during 1849. In 1980, another form of development emerges which was high performance concrete which improves the comprehensive strength of concrete. Few years later ultra-high performance was termed during 1994. In the year of 1997 UHPC was first implemented in pedestrian bridge in Canada. It achieves better stability, serviceability, economy, aesthetic appearance & structural efficiency. Our role in this project is to introduce UHPC in order to produce better strength with minimum cost and minimum usage of material. In case of high performance concrete bridge 5-cpci 1400 girders are used but in UHPC bridge 3-cpci 900 girders are adopted. The use of UHPC is more economical & attains better strength.

II. Material and properties

The following ingredients are used in UHPC

A. Portland Cement

Portland cement is a binding material which is of 53 grade cement which is used in the study which is recommended by IS: 12269-1987.

Table No.1: Properties of cement

S.No.	PARTICULARS	READINGS
1	Specific gravity	3.05
2	Fineness modulus	2.55

B. Fine Aggregate

M-Sand is used as a fine aggregate which improves the uniformity in concrete mixture and it helps as binding material to hold steel fibres. It is used in study by recommendation of IS: 383-1970.

Experimental Study of Partially Replacement of Cement by Prosopis Juliflora Concrete

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Abstract - The experimental investigations are carried out to study the effect of prosopis juliflora in RCC structure by partial replacement or adding on cement. Prosopis juliflora inflorescence is small, green-yellowish spikes without any particular fragrance or attractiveness, though relished by bees. Prosopis juliflora is one of these species that has performed much better than many native woody species. At the moment, prosopis juliflora provides approximately 75% of fuel wood needs of rural people in arid and semi arid regions of India. These species has become naturalized and spread over the greater part of north-west, central, west and south India. Prosopis juliflora is xerophytic and is adapted to many soil types under a wide range of moisture conditions. Prosopis juliflora has been used to arrest wind erosion and stabilize sand dunes on coastal areas. It is fast growing, nitrogen-fixing and tolerant to arid conditions and saline soils. Under the right conditions, Prosopis juliflora can produce a variety of valuable goods and services: construction materials, charcoal, soil conservation and rehabilitation of degraded and saline soils. But wide spread prosopis juliflora has became an invader species so removal of the plant is into necessity now. Mostly the plant is removed by uprooting and is burnt. An experimental investigation is carried out on a concrete containing waste prosopis juliflora ash in the different range weight for cement. Material was produced, tested and compared with conventional concrete in terms of workability and strength. These tests were carried out on standard beam of 700×150×150

1.INTRODUTION

The history of the first introduction of Prosopis Juliflora into India is about 130 years old. Introduction of the species was first seriously attempted in 1970. Owing to its fast growth and drought hardiness, the species has since been introduced in many other parts of India from the north-west to extreme southern parts. Prosopis juliflora is one of the most economically and ecologically important tree species in arid and semi-arid zones of the world. All parts of P. juliflora have a wide range of uses. Prosopis was introduced in India during the 1870s to meet the fuel wood demand and in Tamil Nadu the 1960s, particularly in the composite Ramanathapuram and Tirunelveli districts. In Ramanathapuram district alone, it has commanded an area of about 52,000 hectares. Prosopis juliflora is an evergreen tree with a large crown and an open canopy, growing to a height of 5-10 m. Stem green-brown, sinuous and twisted, with axial thorns situated on both sides of the nodes and branches.

Prosopis Juliflora is found especially in areas with 150-750mm mean annual rainfall and maximum shade

Crumb Rubber Concrete Blocks

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Abstract - *Crumb rubber concrete made up of tire chips, piece elastic and mix of tire chips. Rubber concrete can help to prevent pollution and to overcome the problem of storing used tyres. This reduces crack formation and widening which can withstand much larger tensile loads. These concrete gains importance rapidly due to the increasing demand of superior structural properties. This has the advantage of saving aggregates used in production of concrete which is becoming increasingly scares. Rubber concrete gains a good mechanical properties of concrete when compared to the conventional concrete. Sodium naphthalene formaldehyde is used as a admixture to reduce the water cement ratio. We have added silica fume to increase the compressive strength and tensile strength when 7.5% and 10% of rubber is added to the concrete. The required strength of concrete is attained when silica fume is added.*

Key Words: Crumb rubber concrete, Sodium naphthalene formaldehyde, Silica fume.

1. INTRODUCTION

Concrete is one of the most widely used construction today. More than 90% of the structures ranging from buildings, bridges, roads, dams, retaining walls etc. Utilise the concrete for their construction. The versatility and mould ability of this material, its high compressive strength and discovery of reinforcing and prestressing technique has gained its widespread use. Strength, durability and workability may be considered as the main properties of concrete. In addition good concrete is able to resist wear and corrosion and it should be water-tight and economical. The concrete must be strong enough to withstand without injury all the imposed stresses with the required factor of safety. To develop a given strength lomger time of moisture curing is required at lower temperature than is necessary while curing is done at higher temperature.

Crumb rubber concrete is the concrete made out of piece elastic tire chips and scrap elastic where utilized to supplant mineral today in cement. The common use of waste rubber specifically tire chips have been in highway asphalt mixes. Material characterization experiments have been conducted to determine the practicality of using rubber in concrete. Research has shown that replacement of conventional aggregates with rubber results in a decrease in compressive strength and tensile strength and stiffness. Eldin and senouci (1993) performed tension and compression tests on two types

of cylinders, with portions of the coarse or fine aggregate replaced with rubber. They observed tensile strength decreases of 50% and compression strength reduction of up to 85% however noted that the rubberized concrete absorbed a great amount of plastic energy.

Based on the published literature on crumb rubber concrete (CRC) it is apparent that the ductility and energy absorption is enhanced over that of the conventional concrete. These characteristics may prove beneficial for applications where dynamic blast pressure demands are a concern.

1.1 Research scope

The first rubberized concrete was introduced and explored for potential engineering applications in the early 1990s (Kaloush et al. 2005; Allen 2004). Although combining recycled rubber and concrete aggregates for making conventional concrete was an innovative idea, it was found that the resulting rubberized concrete had lower strength (Khatib & Bayomy 1999; Sgobba et al. 2010; Bewick et al 2010; Ling et al. 2009; Khaloo et al. 2008) and this was not preferable especially for structural applications (Ho et al. 2009). However, rubberized concrete has been found to be preferable for paving applications, where lower range of strengths are including in design.

It can be stated that the incorporation of the rubber has two major opposite effects regarding mechanical characteristics of concrete. The negative impact is associated with the reduction of mechanical strengths. In contrast, the positive effect can be an increase of ductility and deformation capability. However, the extent of positive and negative effects are not similar for the different rubber contents. According to the literature size of rubber particles significantly affects the properties of rubberized concrete. Crumb rubber in the particle size range of one to four millimetres was selected for this study. It would be easier to consider usage of crumb rubber on a wider scale for its practical problem. Thus, a variety of rubber content up to 70% and a broad range of water-content ratios from 035 to 0.55 were examined for preparing concrete mix series.

Finally, the effects of using rubber on shrinkage properties of CRC were studied. Although the assessment of generic properties for CRC is the requirement of Australian concrete pavement standard, this research

Experimental Study on Strength & Durability Parameters of Lime Based Mortar using Natural Herbs as Admixtures

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Abstract: As concern the natural effects and high cost of concrete which is generally utilized, obviously requires substitute defensive folio. In any case, in the principal human advancement, lime is utilized as biodegradable restricting material which is likewise made out of added substances, for example, pozzolana and conventional herbs. In the present ponder lime mortar with structure of gypsum which empowers mortar to set quickly and builds the strength in the proportion of 1:1:2(lime:gypsum:sand) according to IS:4098 – 1983. Additionally utilized concentrate of kadukkai (gallnut) and palm's jaggery in the extent of 5%, 10% and 15% of the heaviness of folio. As the outcome, on expansion of 5% natural concentrate in gypsum lime mortar improves usefulness and increments rigidity, too improved expanded compressive quality about 55% looked at to ostensible lime mortar. It is utilized for fixing and reclamation of authentic or old landmarks.

Keywords: Lime, Gypsum, kadukkai, jaggery and biodegradable.

I. INTRODUCTION

Lime is the genuine green and adaptable structure material. It is the most sustinable cover because of lower generation vitality needs, lower co2 emanation amid creation and co2 assimilation via carbonation. Lime mortar has one section of lime and 3 part of sand (1:3). Lime mortar has a characteristic capacity to both hold and vanish dampness from the dividers hence keeping up a condition of offset with the encompassing climate. Lime mortar can assimilate and dissipate dampness openly. Lime is delicate furthermore, adaptable recyclable material. Lime mortar bit by bit been utilized less because of its long haul quality advancement yet they have high toughness. To expand the quality by expansion of concrete of lime mortar would influences the toughness. As conventional strategy, the expansion of gypsum in lime motar will adjust its trademark. It will in general produce a harder mortar by quick setting and addition its thickness and diminish breaking by letting dampness unreservedly goes about as self recuperating material.In the investigation gypsum to guarantee the setting with more security from wet conditions and concoction attack. Lime is the genuine green and flexible structure material. It is the most sustainable folio because of lower generation vitality needs, lower co2 discharge amid creation and co2 retention via carbonation. The customary added substances specifically kadukkai (gallnut) and palm's jaggery are included the extent of 5%, 10% and 15% of weight of fastener to improve the usefulness and quality paraments. The target of the examination to know the improvement of mechanical parameters for example, compressive quality of lime mortar have been examined.

II. METHODOLOGY

Lime is a folio which is by and large, the reason for the cover is to hold the sand particles together and to fill the voids in the middle of the grains of sand. Hydraulic lime utilized in structure development. Sand is the most widely recognized total in mortars. The consumable water ought to be utilized in suitable sum till accomplish required consistency. Gypsum, kadukkai (Terminalia chebula) and palm's jaggery are added substances of lime mortar.

A. Mix design

Table 1: mix design

Mortar code	Gypsum	Hydraulic lime	Sand	Natural additives
A	1	-	3	-
B	1	1	2	-
C	1	1	2	5%
D	1	1	2	10%
E	1	1	2	15%

DESIGN OF UPVC WINDOWS FOR LATERAL WIND LOADS SANDWICH WITH HURRICANE BARS FOR MULTISTOREY STRUCTURES

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Abstract – *In olden days the windows of multistorey structures built were not to face high velocity winds. These windows are just not strong enough to resist these high velocity winds. That's why the old windows deflect or bend. When the bending or deformation happens narrow air gaps are formed between the frames and walls of the buildings which leads to the allowance of air that creates whistling and rattling sounds in the buildings. Part of these innovations include the formation of fusion welded UPVC frames which consists of galvanized iron reinforcement and toughened glass which lends to exceptional strength of windows. In coastal areas or high rise structures where the velocity of winds are greater, we use the windows consist of Hurricane Bars as a additional support to give further rigidity to frames which reduces the bending or deformation. This project deals with the provision of hurricane bars in UPVC window frame and comparing the values of required and available flexural rigidity under axial load.*

Key Words: UPVC frames, galvanized iron, toughened glass, hurricane bars, flexural rigidity.

1. INTRODUCTION

Generally windows in building are provided to give light ventilation and improve aesthetics of the interior parts of building. The size of window depends upon the direction of wind, speed of wind and dimensions of room. The various window materials that are used in the construction are wood, aluminium and UPVC. Wood and aluminium had been the predominant material in the past has now given way to a new age material called UPVC (Un-plasticized Poly Vinyl Chloride). Earlier, structures were not constructed keeping in mind in erosion during the monsoons, expansion in the size of windows during summer, exposure to UV radiations, aesthetics. Now UPVC have changed all that and minimised these unwelcome intrusions. Wood has become difficult now a days to get access and aluminium is not so good enough and requires more maintenance so UPVC windows are becoming popular because of high energy efficient, excellent appearance and smooth surface finish, soft contoured profiles, and variety of designs to meet the needs of demanding architects, designers and users. The UPVC windows are the best fit for all weather conditions prevalent across India from salty humid corrosive air in coastal areas to suitable temperatures. UPVC windows in residential and commercial construction is used as both new and replacement windows.

1.1 UPVC

Un-plasticized Poly Vinyl Chloride is relatively new to the building industry as a material for windows and doors. UPVC is based on poly vinyl chloride(PVC), one of the most versatile polymers found.

UPVC is prepared with a special formulation in which different stabilizers and modifiers are added to poly vinyl chloride to make rigid and suitable for use as window frames. UPVC contains poly vinyl chloride(PVC), calcium carbonate($CaCo_3$) and titanium dioxide (TiO_2). PVC forms the major constituent of blend composition. Unlike other polymer PVC is heat sensitive and requires additives during processing. Hence the properties of PVC can be increased through additives like light and UV stabilizer, fillers, pigments and lubricants can be added during the blending process. Titanium dioxide is an expensive pigment used for imparting natural white color to the UPVC profile and provide necessary UV stability for the product. Calcium carbonate are fillers which are inorganic minerals as fine particles homogenized in PVC blend. Usage of filler has effect on mechanical property like tensile strength, elongation, impact strength, shrinkage and cost. Production of UPVC involves a complex extrusion process. Extrusion is a manufacturing process where material is drawn through a die of required cross section. The main advantage of extrusion process is that it can create very complex sections and also can be used for brittle objects. Additionally this process provide excellent surface finishes. UPVC extrusion process can be recycled. UPVC has excellent insulation properties resulting in high energy efficiency.

1.2 Hurricane Bars

Hurricane bars are the reinforcement provided in the chambers of UPVC window frames. These bars act as a mullion stiffener to withstand high velocity winds. Hurricane bars made of galvanized iron blended in different forms like U, C, etc,. Galvanized reinforcement are the normal reinforcement which are coated with a protective layer of a zinc metal. Zinc coating usually carried by hot dip galvanizing process which serve as a barrier to corrosive environment. Hurricane bar is provided in the hollow portion of the window frame which provides an additional power to bear the wind speeds up

BUCKLING BEHAVIOUR OF COLD FORMED STEEL SECTIONS

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Abstract - Cold formed steel members are made from structural steel sheets by bending or forming into different shapes by roll forming the steel through a series of dies. The advantage of cold formed sections is that, no heat is required to form the shapes unlike hot-rolled members. CFS does not shrink or split, doesn't absorb moisture and also resists warping, termites and fire. The strength and ductility of CFS makes it ideal for construction in regions subjected to high speed winds and earthquakes. Different varieties of steel thicknesses are available that meet a wide range of structural and non-structural applications. According to National Association of Home Builders (NAHB) Research Centre, zinc coating on steel can protect it against corrosion for hundreds of years. With developments such as panelized systems, the usage of CFS has increased a lot. In fact it is becoming the material of choice of construction for student dormitories, assisted living facilities and hotels across the country. This project deals with the altering a channel section with provision of lip and comparing their buckling modes under axial load using the software CUFSM.

Key Words: Cold formed steel, buckling mode, channel section, lip, CUFSM.

1. INTRODUCTION

There are two main families of structural steel members. One is the familiar group of Hot-Rolled Steel (HRS) sections and other is Cold Formed Steel (CFS) members. The CFS members are widely used in various fields including the construction of buildings, bridges, storage racks, highway products, drainage facilities, grain bins, transmission towers, car bodies, railway coaches and various types of equipment. CFS members are more economical compared to hot-rolled members due to its high strength to weight ratio, ease of construction and sustainability for a wide range of applications. The thickness of steel sheets or strip generally used in cold-formed steel structural members range from 0.4 mm to about 6.4 mm. The materials used in cold-formed thin wall members have to satisfy certain criteria to be suitable for cold-forming and usually also for galvanizing. The yield strength is normally in the range of 220 to 350 N/mm², but also some high-strength steels with yield strength of over 500 N/mm² are used. In some cases, due to practical reasons such as transportation, handling etc., thickness of the material used in profiled sheeting is limited.

1.1 Benefits of Cold-Formed Steel sections

Generally, cold-formed steel sections have several advantages over hot-rolled steel section, timber sections and concrete. The main aspects are listed as

- Cold forming improves the yield strength of steel to some extent. The improvement of the yield strength is the consequence of cold working well into the strain-hardening range. The improvements in yield strength are predominant in zones where the metal is bent by folding. The effect of cold working is thus to enhance the mean yield stress by 15% -30%. For design purposes, the yield stress may be regarded as having been enhanced by a minimum of 15%.

- Consistency and accuracy of profile: The nature of the manufacturing process: Cold rolling - enables the desired profile maintained and repeated for as long as it is required, in a very close tolerance. Moreover, the very little tools wears and the cold rolling process is ideally suited to computerized operation which assists to the maintenance of accuracy.

- Versatility of profile shape: Almost any desired shape can be produced by cold rolling, such as T-section, Z-section, Sigma-section etc.

- It could be pre-galvanized or pre-coated: The steel material may be galvanized or coated by plastic materials either to enhance its resistance to corrosion or as an attractive surface finish.

- Variety of connection and jointing methods: All conventional methods of connecting components, e.g. riveting, bolting, welding and adhesives are suitable for cold formed steel section.

- Speedy in construction and suitable for site erection: Generally the steel construction has eliminated the curing time which is inevitable in concrete construction; therefore it is faster than concrete construction. The cold formed steel may be more advantageous than hot-rolled steel since it can be cut and erected with very light machine and even only man power.

Experimental Study on Strength & Durability Parameters of Lime Based Mortar using Natural Herbs as Admixtures

Mrs. S. Vallabhy[1], Deepak. S[2], Gnana Ezhilan[3], Karthi Keyan. S[4], Magarish.S[5]

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CSE

18-19

A quality of service load balanced connected dominating set–stochastic diffusion search (CDS–SDS) network backbone for MANET

V.R. Kavitha [a] ⚇ ✉, M. Moorthi [b] ✉

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Abstract

Owing to its dynamic topology with the lack of its central administration, the provisioning of quality of service (QoS) in case of the mobile ad hoc networks (MANETs) has been found to be a challenging task. The QoS and load balancing will be crucial for the support of delay sensitive services in the MANET. The probability of route failure in the MANET will be increased owing to the node mobility that will increase its routing overhead. The Multi-path routing protocols will have a greater ability in the reduction of the routing overheads. In this work, ad hoc on-demand multipath distance vector routing (AOMDV) and QoS-AOMDV are investigated and a connected dominating set (CDS) that is an energy efficient scheme which can prolong the lifetime of the network is proposed. In the proposed algorithm, an optimal minimal residual energy with a maximum effective degree of the nodes for the purpose of back bone formation. The optimal weight-based coefficients will be determined by the stochastic diffusion search (SDS) and its algorithm. After this, while choosing nodes for the dominating set (DS) and its formation, such coefficients will be used.

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Keywords

Mobile ad hoc networks (MANETs); Quality of service (QoS); Load balancing; Ad-hoc on-demand multipath distance vector routing (AOMDV); Connected dominating set (CDS); Stochastic diffusion search (SDS)

FEEDBACK 💬

A survey on connected dominating set construction algorithm for Mobile Adhoc Networks

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Abstract

The wireless type of ad hoc networks are usually viewed as an infra-structure less network, meaning a backbone less network, which does not rely on any fixed structures, these are multi-hop type of networks. This network usually comprises of mobile or wireless devices, these devices do not remain fixed at any particular points, namely the Mobile Ad Hoc Networks (MANETs), the Mobile Opportunistic Networks (MON), the Wireless Sensor Networks (WSNs) and the Under Water type of Acoustic Sensor Networks (UWASN).

These networks are found to withhold some significant type of characters, such as the requirement of minimum bandwidth and a dynamic type of topology. In these networks, energy is a precious resource, it is considered so as each of the individual nodes possess their own energy source based on their needs. For the purpose of increasing the lifetime of these mobile ad hoc networks it has turned out to be mandatory for incorporating routing algorithms that has proved it efficiency appropriately.

As far as a Connected Dominating Set (CDS) or a Virtual Backbone (VB) is considered, it is clearly observed as a subset of nodes. These nodes are capable of establishing the data communication oriented tasks, further they are found to involve themselves in the process of serving the nodes that are found outside the concerned backbone zone. One significant feature is that the CDS can be preferably opted as a communication layer; an additional feature is that only the nodes within the CDS have been found to possess the required permissions for transmitting the concerned data. The above mentioned features have enabled the network in suitably minimizing the transmission of redundant information, this quality greatly involves in the process of simplifying the corresponding structure of the concerned

On Spot Accident Information and Insurance Dispute Resolution

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-----ABSTRACT-----

Initially it took long time to claim insurance whenever accident take place for the victim . To overcome this we introduced web portal for the easy use of insurance. There should be a system/portal for gathering of on the spot information during road accidents. This information should include photos of the site,interviews with eyewitnesses, information on injuries and fatalities, reason ,speed, road condition on relative basis, etc. The responsibility for collecting the data could be given either to police, transport authority, ambulance or even ordinary citizens who volunteer for the same.In the same system, there should also be a provision to submit/ exchange insurance numbers/ details in order to settle the dispute if any arising out of accident. It reduces delay of accident reporting and makes even more easy to claim insurance.

Keyword - Insurance, Accident report, Eyewitnesses, Police.

I. INTRODUCTION

Road accidents are undoubtedly the most frequent and, overall, the cause of the most damage. The reasons for this are the extremely dense road traffic and the relatively great freedom of movement given to drivers. Accidents involving heavy goods vehicles (especially coaches andlorries with trailers) occurall too frequently despite calls for responsible behaviour, for respect of the loading regulationsand thehighway code, as well as the obligation for drivers to adapt their speed, which affects stopping distances, to the traffic and weather conditions (rain, ice, fog, etc.). The prevention of road accidents is also extremely important and will be ensured by strict laws, by technical and police controls, ongoing training for drivers (especially those involved in the transport of dangerous substances) and, if need be, by legal and administrative penalties for those responsible.

The control of all accidents is, in the first instance, the responsibility of the commander (chief) and personnel of the affected means of transport. It is up to them to limit the resulting damage as much as possible. Passengers must obey the directives of the personnel on board (protective and rescue measures) and behave as they are instructed by the regulations on disaster situations, especially air, rail or maritime disasters.As far as search, rescue and assistance operations are concerned, the means or system of transport involved and the area (country) where it occurs will determine who is the person in charge at the disaster site.

II. RELATED WORKS

[1] "Methods Of Pre-Generating Insurance Claims", by TM Potter, ME Clauss, DR Carter, DA Graff - US Patent App. 10 Volume : 072018

A system used for pre-generating insurance claims, accident data associated with a vehicle accident involving a driver may be collected. The accident data may be analyzed, and a likely severity of the vehicle accident may be determined based upon the analysis of the accident data. An estimated insurance claim may be generated based upon the determined likely severity of the vehicle accident, and transmitted, via wireless communication, from one or more remote servers to a mobile device associated with the driver to facilitate presenting all, or a portion of, the estimated insurance claim to the driver or the insured.

III. PROBLEM IDENTIFICATION

A lot of efforts have been earlier done on web based information system in case of road accidents, traffic information management, analysis and reporting etc. Also, the system is prone to increase the false positives because there is no filter in place to verify if an accident detected is a real accident or just false.Difficult in retrieving the report back for analysing purpose and time consuming. The accident reporting form must be completed by handy and often leads to delays in report submission.

IV. PROBLEM SOLUTION

In proposed system, all the information about accident can be directly report to the emergency system. In this we are going to maintain a web portal where we can gather all the information during road accidents and the information includes photos of the site,information about injuries and fatalities and reason for accidents.The centralized server or database is maintained to store all the information.The benefits include reduce delays, report submission to

Implementation of SAP ERP Based HR Module for an Educational Institute

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--ABSTRACT--
Mechanization business is increasing in the world, the HR module in Enterprise Resource Planning (ERP) has rich feature which are static in nature and integrate seamlessly with assorted modules. ERP system are adopted by various academic institutes for key management and educational offerings. ERP based HR module provides huge solutions for HR stream and making it feasible for different branches to get access to specific worker record. SAP ERP (Enterprise Resource Planning) is commercial software that integrate all the data in single software, considering numerous factors like time and cost. This helps to manage the complete information and process about the employees in an organization. This paper emphasis on techniques of ERP-based HR module for educational institutes to utilize the human sources.

Index Terms- **ERP, Academic Institute,HR module.**

I. INTRODUCTION

With the presentation of ERP framework, any instructive association, the information in their measurements gadget is a record, an envelope, a digital book, or any computerized data from any electronic gadget. The ERP Device is the quality response for any data framework which remains your framework basic after it has constructed the structure of the framework in over of period. Improvement and asset utilization is the key part of any enterprise which has the tendency to achieve the top of the line result from the overarching framework. Establishment control is the biggest mission for any association to pick up the favoured wants, brilliant quality and the objectives. ERP structure are trailed by the various instructive association for the key administrative and hypothetical administrations. In an instructive association the blend of all venture assets speaks to the blending of framework for human asset the executives (checking of representatives) and fund (bookkeeping, installments, speculations and accounts) that was once fortified through discrete and regularly incongruent information application. These days, Industries are restoring the human resources and transforming them into one of the basic highlights of the test the executives. In an association HR capacities are completely coordinated and mostly concentrating on the executives, recruitment and giving guidance for the general population who are working. The exploration on HRM in the structure of ERP is generally new.

II. ENTERPRISE RESOURCE PLANNING SYSTEM

Enterprise Resource Planning (ERP) is programming that joins all stream and capacities over an association onto a solitary PC framework and serves all the office's specific needs. ERP is a typical name for all product given by different merchants. A portion of the ERP merchants are SAP, ORACLE, BANN, Microsoft and so forth. The Enterprise Resource Planning arrangement through SAP (a product bundle) is observed to be appropriate to manage our immense system of business.

2.1. Benefits Of SAP-ERP

• SAP is fundamentally utilizing in all business the board assignments of an organization which incorporate paying solicitations overseeing item and client data, and controlling accounts.

• SAP is dealing with the errands in modules that all work together in single framework by sharing data.

• Normal database is utilized in SAP R/3 in light of the fact that as you enter the data in the framework and that is made accessible to whatever remains of the

Rural Drinking Water Supply Using Application

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-- ABSTRACT--

Now a day, water becomes basic requirement need in the environment. In the world 80% of diseases are associated with water is been estimated by world health organization (WHO). So we provide the way by offering service providing and monitoring for the water. In our project we connect the supplier with the customer using an Android application. It is very useful to the customer to order water for a month or for a particular day and the required accessories.

Keywords- Android Studio, Firebase Authentication, Firebase Database, Chabot.

I. INTRODUCTION

Human begins needs water as the basic need for the survival and development. Now a day's water become demanded, which affects the basic life of the rural area peoples. Water is very basic need for both living and non-living things, which becomes basic need for determinant standard of living. Traditionally, most of the peoples in the rural areas take water from the unprotected ponds or tanks, wells, cisterns and sometimes in streams and rivers. These water sources are frequently used for drinking and cooking, washing clothes, bathing, Livestock washing, etc. Infections are transmitted through living carriers which found are in water bodies. Infections are spread by insects that depend on water. Infections due to the lack of sufficient water for personal hygiene .These ailments potentially constrain human resource development and productivity, especially of the poor. While governments attempt to provide adequate and safe drinking water to all households, supply and demand side factors determine the level of water availability. Hence, the role of organized water supply in the prevention of water-borne diseases and in the promotion of public health can be well appreciated.

II. LITERATURE SURVEY

1.1. Rural Drinking Water Supply in Karnataka
The Rural Drinking Water-A Case Study of Mysore Thaluk revealed the following findings...? Total households using tapped water (treated) in Karnataka is only 41% and tapped water (untreated) is about 25%.

1.2. Drinking water supply management in municipal corporations of Maharashtra
This paper measures the demand and supply of drinking water in Municipal Corporations in Maharashtra. The demand for drinking water is continuously increasing due to growth of population, industrialization and commercial units. Drinking water is not provided on a sustainable basis in the municipal corporations. Water has price in terms of time, space, quality and quantity

1.3. Monitoring Rural Water Points in Tanzania with Mobile Phones: The Evolution of the SEMA App
In this paper, they main focus is on mobile phone-based ICT platform for water services, called Sensors, Empowerment and Accountability in Tanzania (SEMA), developed by team in the context of an action research project in Tanzania. Water users in villages and district are mostly engineers in local governments can use it to monitor the functionality status of rural water points in the country.

III. EXISTING SYSTEM

It deals with only ordering and supplying of required services Delivering of products is delayed due to lack of distance. No links between the suppliers for the betterment of providing services.

IV. DRAWBACKS

- Delayed in providing services.
- Lack of location identification.

V. PROPOSED SYSTEM

Developing an Android application for linking between the suppliers like chat for providing the services through sharing of location at the required time by making themselves Interconnected. Also helps in building the bridge between the customer and the supplier.

VI. ADVANTAGES

- Location sharing and time management.
- Providing of linked services.

VII. MODULES

7.1. Home Module
In this module, we have created the login, signup page for both admin and customers, once we have signed up to the application, again we can login by using valid email and password. In Home page it contains contact and help pages to help the customers whenever they have any queries.

IoT Enabled Smart Vehicle Safety System

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--ABSTRACT--

The exponential growth of the metropolitan cities of the country has generated and magnified urban sprawl into problematic proportions. Lack of efficient traffic control and management has many times lead to the loss of lives due to ambulances getting stuck in traffic jams.At present criteria, we cannot detect where the accident has occurred and hence no information related to it, leading to the death of an individual. The research work is going on for tracking the position of the vehicle even in dark clumsy areas where there is no network for receiving the signals.Our project will provide an optimum solution to this drawback. The proposed system has a GPS for tracking the position of the vehicle, GSM is used for sending the message and the ARM controller is used for saving the mobile number in the EEPROM and sends the message to it when an accident has been detected. An LCD display is used to display the latitude and longitude values and as well as speed in knots. Once the accident is held up an alert will be sent to the concerned mobile number for rescue. The device is also encompassed with an alcohol sensor in order to sense the alcohol consumption level of the driver. If the driver has consumed alcohol the vehicle will automatically get stooped and an intimation message will be transmitted to the concerned person or family members to rescue the driver. In this project, the vehicle is designed in a way of controlling it with a mobile device via Bluetooth. An obstacle sensing device is also placed in the vehicle so that when an obstacle is sensed at a distance of 40m, the speed of the vehicle will automatically get reduced without any manual operation.As there is a scope for improvement and as a future implementation we can add a wireless webcam for capturing the images which will help in providing driver`s assistance.

Keywords- Iot, Microcontroller, GPS, GSM, ADXL335, HC-05, Mq3, L298N, Accident alerting system, Mobile controlled vehicle, Alcohol monitoring.

I. INTRODUCTION

The Life of the people is under high risk. This is because of the lack of the best emergency facilities available in our country. An automatic alarm device for vehicle accidents is introduced in this project. This design is a system which can detect accidents in significantly less time and sends the basic information to first aid center within a few seconds covering geographical coordinates, the time and angle in which a vehicle accident had occurred. This alert message is sent to the rescue team in a short time, which will help in saving valuable lives. A Switch is also provided in order to terminate the sending of a message in a rare case where there is no casualty, this can save the precious time of the medical rescue team. When the accident occurs the alert message is sent automatically to the rescue team and to the police station. The message is sent through the GSM module and the location of the accident is detected with the help of the GPS module. The accident can be detected precisely with the help of accelerometer (ADXL335). This application provides the optimum solution to poor emergency facilities provided to the roads accidents in the most feasible way. The

high demand for automobiles has also increased traffic hazards and road accidents.

II. RELATED WORK

[1] proposed an alcohol detection and motor locking system. They used the AT89S51 controller, MQ-3 alcohol sensor, and an LCD to notify the occupiers of a car. The AT89S51 controller has an onboard flash memory which allows fast development and reprogramming in a matter of seconds. Kousikan., Sundaraj [2] employed an infra-red (IR) alcohol detection system to provide continuous monitoring of a driver's BAC. An IR source LED-894 was used to direct IR energy through an IR sensor (TSOP 1736) mounted on the steering wheel. The activation of the relay circuit is made possible by an interface of IC-4538B and transistor-BC 547. Pratiksha et al.

III. PROBLEM IDENTIFICATION

Regularly, in metropolitancities, most of the accidents are due to drunken drivers and there is no emergency alert

Crop Management and Irrigation Automation Using Data Analysis Techniques

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------------------ABSTRACT------------------

Our farming face agrarian generation is scattered, rural utilization is differentiated, and association and docking are poor between little scale creation and market. We propose the agrarian promoting data suggestion framework dependent on distributed computing so as to give exact proposals to ranchers. We propose a framework to insinuate ranchers about the harvests to be seeded in the particular season and furthermore make the ranchers mindful of the flow advertise rate of the item. This sort of framework is much gainful for the youthful age to adjust to the conventional cultivating procedure.

I. INTRODUCTION

Computerized crop checking is a critical part of exactness cultivating, on the grounds that it enables the ranchers to settle on educated choices in regards to when, where, and how much compost or pesticide to apply in the field just as to improve yield estimation. With the wide accessibility of business UAVs, it has turned out to be genuinely simple to over and over secure picture information of the fields with no master help. This has prompted a few new applications in the agrarian mechanical technology network. Best in class picture enlistment techniques can enlist pictures from a scene and process a 3D model of nature. Normally, these techniques depend on a visual descriptor, for example, SIFT, ORB, BRIEF or like play out the information relationship among the pictures. In harvest cultivating, fields and yields are influenced by solid visual changes, because of the climate, developing harvests, and homestead hardware, for example, tractors influencing the dirt. Most enrollment strategies are not ready to adapt well to these adjustments in appearance

II. EXISTING SYSTEM

In the existing system the crops, weeds, pest damages, diseases and nutrient deficiency in plants are identified individually by kinds of prototype like robots, expert systems, remote sensing and vice versa In some cases the identification is related to specific plant species In existing system the models are expensive. The crops are identified only at fully grown stage i.e., the automatic identification during agricultural season is not possible which is an important issue.

2.1 Disadvantages in Existing System
- In the existing system the external hardware is used.
- The hardware which is used in the existing system is very expensive.

III. PROPOSED SYSTEM

We propose the rural advertising data suggestion framework dependent on distributed computing so as to give precise proposals to ranchers. We propose a framework to imply ranchers about the yields to be seeded in the particular season and furthermore make the ranchers mindful of the ebb and flow advertise rate of the item. This sort of framework is much useful for the youthful age to adjust to the conventional cultivating method. Offering is a tedious undertaking yet our proposed framework gives the genuine market rate and after that it illuminates the client about the flow advertise rate to maintain a strategic distance from the rancher offering or getting conned by the retailers.

3.1 Advantages in Proposed System
- In proposed system the bidding problem can be avoided so that the farmer can be utilized.
- flexible to users
- Cost is not the issue because of the web-based application.

IV. METHODOLOGY USED

There are certain important modules involved in the overall development of the web application and they are as follows:
- Administrator Endorsement
- Monitor And Maintain The Crops
- Predict And Detect Pests
- Online Computerized Agri-Auction Portal
- Fertilizer Expert System

Hospital Seeker

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---ABSTRACT--

In medical emergencies commonly, we face problem in deciding which hospital they should visit for specific disease treatment.We face problem in identification of medical resources like medical facility, medicines, and bloodbanks. Hospital seeker will solve this problem by allowing people to find the specific hospital on basis of disease treatment, specialist doctor's , medicine and blood availability.

Keywords- Hospital Finder,Android App,pharmacy,Diagnostic centre,Blood bank,Disease.

I. INTRODUCTION

The application provides an effective way of routing and locating the nearest specialized hospitals for the requested medical treatment.It also providesinformation about the nearest hospital based on the category of disease.In this application there is no registration or login page,so the users can have ease to access application during any emergency time.It also provides rating and review about the hospitals based on the users rating and review.The application provides information about the availability of medicines in pharmacies and blood availability in blood banks.It also provide information about the equipments available in diagnostic centres and hospitals.

II. EXISTING SYSTEM

In Existing Application only Hospital list basedon speciality is present.All the other facilities are addressed individually.

2.1. Disadvantage in existing system

- It will not provide the specialized hospital for the specific disease.
- It contains login module which makes delay to find hospital during emergency time.
- No information about the availability blood group in the blood bank.

III. PROPOSED SYSTEM

The system poses different medical based application on single application.It shows the nearest specialized hospital location on the basis of specific disease based on the user needs.

3.1. Advantage in proposed system:

- There is no registration or login page. So the user can easily access application.
- It provides the availability blood group in blood bank.

IV. METHODOLOGY

4.1. Flow of Application-
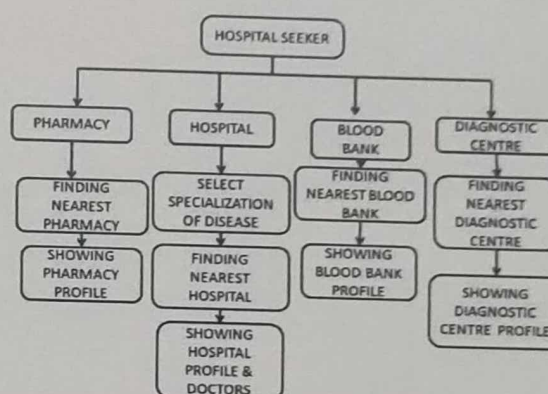
Figure 1:Flow Diagram.

Initially the user can select the any one of the module. Based on that it locate the nearest hospitals, pharmacies, blood banks and the specialization in the module.

4.2. Algorithms

4.2.1. Geocoding Algorithm
Geocoding Algorithm is used to convert Physical Address to geographic coordinates.

4.2.2. Reverse Geocoding Algorithm:
Reverse Geocoding Algorithm is used to Convert Geographic Coordinates to Physical Address.

4.2.3. Distance Matrix Algorithm:
Distance Matrix Algorithm is Used to find the nearest location .

4.2.4. Dijkstra's Algorithm:
Dijkstra's is used to find Distance between User Location and nearest Hospital

Geographical Profiling of Locations Based on Security and Survelliance

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------ABSTRACT------

In21st century mobile and information technology has a greater impact in our lives. From online food ordering apps to Facebook everything is customised into the palm of our hand. The emerging development of mobile application technology can be used to help the society in many ways. Presently crime is the major problem in our state.Geographic profiling is the process of determining the most probable area of an offender's base of activities through an analysis of his or her crime locations.Using mobile application methodology, we can develop a mobile application that generates and analysed crime report based on particular location This application has a functions like search crimes by locations, posting a crime incident (record crime) on live feed through live video streamingand gives an analysed crime report based on locations through intergrated google map.

Keywords- Android, Mobile technology, Location safety aware, crime detection, crime reporting.

I. INTRODUCTION

Today's world is all about technology and humanresources. Many fields like Argriculture,Travelling, Marketing uses Technology. One such area is crime area detection and storing criminal data record.In present scenario criminals are becoming technologically sophisticated in committing crime and one challenge faced by intelligence and law enforcement agencies is to locate the crimes that are happening in particular vicinity. We know that crimes are illegal part which cannot be stopped completely but at least we can make an effort to prevent it from happening by which it is notified in this application.Police have a crucial job of getting information of crime through walkie-talkie. Recently there was an android application Vic PD which was launched by the Victoria police in the Canada for people safety. In that application they had a communicationgap between police officials and the investigation of crime because the data Isnotavailableremotely . Also the another proposed system is crime area detection and criminal data record in which their the system recording crime and giving alternate routes to user as soon as user enters in the particular area but this system failed to indicate a crimes locations to the user by googlemap [3].In this application.It projects the analysed crime report that happened in each location. We used google map API for displaying the map of cities where the crime happened, this app also has additional features of enabling police complaint i.e, you can lodge a complaint of a crime with your details and your category of crime will be stored in the server along with your details . we also has an extended feature of broadcasting the live crime occurrences through live video streaming. We usedWonza streaming engine coupled with JW player and the live feed will be displayed on the WAMP server.

II. EXISTING SYSTEM

In current situation there are many mobile applications for crime reporting.In recent time Tamilnadu police released an application called digicop that is used to report the crimes of theft of mobiles and two wheelers.But the main problem with the existing system is that the application is only limited to some features and does not satisfy all the end users.the main problem is that it doesn't support crime prevention and is only limited to crime reporting.At present Information age ,it is not enough just to report the crime but must also regonise the crime locations.

III. PROPOSED SYSTEM

In this paper we have proposed an android application to show analysed crime (live crime occurring at some place), view emergency number etc. The proposed system is also able to store crime details. We are also storing user input like user's name, address etc. (User's personal detail) on this application. Our system also provides an application for the user which consists of an alternate path if they are passing by crime area. Using this application users will also be able to register complaint to police officials. We are going to develop a live video streaming modules to show live feed on ongoing crime in particular location where the user can broadcast. This information is represented on the android application by mapping the result of user request on google map. Our system mainly targets general public and crime analysts for managing the incidents and crime. This proposed system will be divided into three major modules.

Entrepreneurs Hub

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---ABSTRACT---

Technology helps entrepreneurs to start to grow and monitor their business.Entrepreneurs need to do research, gather and manage their resources, maintain a communication level, build their brand presence, reach new clients, keep a track of all the accounts, and much more. This application has a search and index mechanism, so people can search other entrepreneurs based on the sectors of their interest. They can also add them to their friend's list which will help them to communicate with them easily. This application also provides entrepreneurs to create a club to form a network of people with similar interest so that they can partner which may help them to grow their business and they can also organize club meetings to share their knowledge with each other which help others especially beginners to enhance their knowledge.

Keywords- **Entrepreneur, user, admin, event, news fee, and register.**

I. INTRODUCTION

Social media applications are becoming more popular since internet access is available in every nook and corner of the world and also the popularity of the Android operating system. But there is no separate social application for entrepreneurs to market their items and only web portal is available for the entrepreneurs. So we are making separate applications which close the gap between entrepreneurs and consumers. The application also provides several features for both entrepreneurs and consumers like the entrepreneurs can create events that showcase their product where the consumers can join the events, they can also send news feed to the users regarding their future product updates. We have enhanced an in-built calendar in the application which notifies the events holding on a particular day.

II. EXISTING SYSTEM

In the existing application, the entrepreneurs need to rely on the web portal to advertise and search the consumers.
The disadvantage in the existing system:
- The only web version is available with a lack of features.
- No mobile application is available.

III. PROPOSED SYSTEM

The application is mainly focused on entrepreneurs with lots of using full features like news feed, event creation, etc.,
The advantage in the proposed system:
- Simple and user-friendly.
- Highly scalable.
- Compatible with all versions of Android OS.

IV. METHODOLOGY

4.1. The flow of Application-
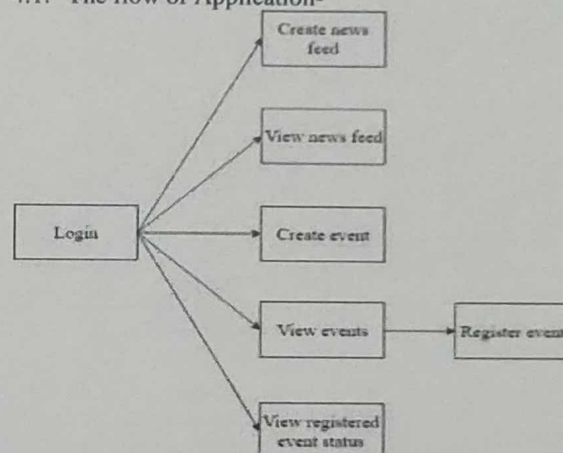
Figure 1: Flow diagram

Once the user logged in after registration they can create news feed or events. They can also view feeds in the news feed section and register events which are available on a particular day.

4.2. Algorithm-
Online greedy algorithm:
The greedy algorithm is used to find the global optimal solution for the problem while finding the local optimum at each stage in the event registration process.

V. MODULE IMPLEMENTATION

- Log-in and registration module
- Create news feed
- View news feed
- Display event
- Create an event
- View event
- Register event

Intelligent Door Lock System

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--ABSTRACT--

Security is one of the important aspect of the home security system. Now a days an unauthorized person access the door. To overcome this we are introducing intelligent door lock system which provides security authentication, flexibility to users. It is based on Internet of Things (IoT).It simply lock and unlock the door from anywhere using cloud.Web cam captures an image, Raspberry-Pi sends an image to Gmail. Firebase database is used to access the door.

Keywords - Raspberry-PI, Webcam, Relay, Nodemcu, Firebase.

I. INTRODUCTION

In every one day to day life, door is common device which can be accessed   by everyone.First peoples usedbolts and woodenpegs to lock up their homes. Since then, lock-and-key technology has really   evolved, which was used by people widely. Again door lock system was evolved to Electronic keys called cards.It have become increasingly common. The cards don't reveal much about the mechanism of the locks they open the key is encrypted in its magnetic stripe but they do provide a blank canvas for ornamentation, which is mostly used in hotels.Again it turns to keypads,it makes possible to imagine a future where a chip in your wallet gives you access to your home. Although electronic systems are more expensive than traditional keys more likely to be found in institutional settings high end home have begun using them and they are expected to become more popular in regular home.An door lock system which is used nowadays provide some characteristic different from the traditional door lock, and also it provides improved features of door lock system over traditional door lock system such as accuracy, convenience, flexibility, privacy, and mobility. But door lock system suffers from various drawbacks such as matching accuracy,for face recognition the most matching image is selected from the database it decrease the matching accuracy, if authorized person tries to unlock the door, face changes in authorized person due to both acquisition environment and physiological characteristics reduce matching accuracy, consumes large volume of storage, mass update doesn't allows users to update and edit database simultaneously, it affects door lock system. In our door lock system, it does not need any database to store images. We have created the Firebase Real-time Database is a cloud-hosted NoSQL databaseto access the door. In our door lock, it captures live image by using web cam and the captured image is sent to Gmail via Raspberry-Pi. By seeing image we can access the door by using real-time database. It is user friendly. It is made as simple as possible with only basic functionalities.

II. LITERATURE SURVEY

2.1 Automatic Locking Door Using Face Recognition

The door will open automatically for the authenticated person due to the command of the microcontroller. Since PCA reduces the dimensions of face images without losing important features, facial images for many persons can be stored in the database. Although many training images are used, computational efficiency cannot be decreased significantly. Therefore, face recognition using PCA can be more useful for door security system than other face recognition schemes.

2.2 Real Time Databases For Applications

A real-time database is one which stores data to database and fetches data from it very quickly but Firebase is not just a real-time database, it is much more than that.

2.3 Review on door bell notify with image capture and forward through email

It uses Raspberry Pi as its controller and obstacle detector that detects presence of someone wherever we tend to place this module either at a door close to home or at offices, factories or the other place wherever we'd like observation and dominant each minute for the aim of security.

2.4 PCA Based Efficient Face Recognition Technique

An image is first scanned and then it is stored in the database of image category for further uses. For face recognition a most matching image is selected from the database. Face of the image is detected and recognition of face is performed. On the basis of particular threshold it is decided that face is recognized or not. For the recognition of pattern, first features are extracted from the image. According to extracted features an image is classified using different methods.

Digital Cash: Tracking of Users in Bitcoin Transactions

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---ABSTRACT---

Digital cash is a type of cash available in digital form. It exhibits the properties similar to physical currencies, but can allow for instantaneous transactions and borderless transfer-of-ownership. In today's world, amount transfer is happening through normal banking process. The bank finds an easy and convenient option for most people, but they charge excessive fees. To overcome this, we introduce a Digital cash transfer that will happen through cryptocurrency called Bitcoin. The process of cryptocurrency transactions will be implemented by blockchain technology. The admin creates a group to add the members. Group members can add other people as a group member, only after getting consent from the admin and the other group members. The new member has permission to add the other people. The mandatory prerequisite imposed to the group members is to link their Aadhar number. Bank transaction details are extracted through their Aadhar number. If any person needs fund they have to give a request to the group members for bitcoin transaction. Anyone can give the response to that requested member. Their transaction gets proceeded through an authentication like username, password. Group Admin monitors the entire activity of the group. All the Transactions are tracked by the main Server.

Keywords - Bitcoin, blockchain, cryptocurrency, digital cash, peer-to-peer computing.

I. INTRODUCTION

Money transfers are widely preferred to be made on the Internet for a long time, especially in the last decade, as with many other things in this digital age. This preference comes from the speed, which is provided by the digitalization and needed in busy daily life, as well as increasing global connectivity with the rise of digital businesses and social networks. Commerce on the Internet is done assured that financial institutions and banks serve as trusted authorities. This model can be called trust-based; buyers and merchants may not trust each other. However, they trust well-known banks and banks act as trust entities managing transactions and keeping records. However, there are some disadvantages to this trust-based model. First, financial institutions act as mediators between merchants and buyers, and there exists a cost for mediation. This limits the minimum transaction size. Second, there is a possibility of reversal of transactions. Transactions can be reversed by banks if there is a dispute between the trading parties, e.g., the buyer transfers the money, but the seller does not send goods or provide services to the buyer. Merchants get information about their customers. Merchants do not have to get extra information about their customers like billing address,name,etc.When transactions are irreversible. Inaddition, irreversibletransactions protect merchants from chargeback fraud, i.e., a dishonest buyer says that he did not make the purchase. If dishonest merchants are considered, using security services may be a method for protecting buyers in the case of irreversible transactions.

The blockchain is a decentralized, distributed and a public ledger that can record transactions between two parties. It is an open source technology and a list of records called blocks. Each block contains cryptographic hash functions of the previous block. The blockchain is typically managed by a peer to peer network for communication and validating new blocks. It was invented by a person named Satoshi Nakamoto in 2008.This invention has been made in order to solve the double-spending problem without the need of trusted third party. The benefits include greater transparency, enhanced security, improved traceability, increased efficiency and speed of transactions.

Bitcoin is an open source peer to peer(P2P) network. It is the decentralized digital currency that can be sent from user to user on the peer-to-peer network without the need for intermediaries and Satoshi is the smallest unit of currency. Bitcoin uses public key cryptography. Bitcoins are the transparent payment network, since all the transactions are public.

In today's world, the internet has security problems that are familiar to everyone. So we all rely on the username/password system to protect our personal identity. Blockchain security methods use encryption technology. The basis for this called public and private "keys". A "public key" is used as an address of the user in the blockchain. A "private key" is used as a password that gives its owner can access their bitcoins for transactions. The users can pass the bitcoins to another user by digitally signing the hash of the previous transaction by using their private key. Transactions are verified by the network nodes through cryptographyand

Online Certificate Validation Using Blockchain

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---ABSTRACT--

Lakhs of people getting Degrees year after year, due to the lack of effective anti-forge mechanism, events that cause the graduation certificate to be forged often get noticed. In order to solve the problem of counterfeiting certificates, the digital certificate system based on block chain technology. All the illegal activities filled against a person and all the activities are updated in the Personal ID. Using the modification process we would monitor not only the degree cortication alone but also entire personality and behavioral activities of that person. We deploy Unique based monitoring using this system.

Keywords – Block chain, hyperledger, digital certificate, hashing.

I. INTRODUCTION

1.1 Background Information

Advances in information technology, the wide availability of the Internet, and common usage of mobile devices have changed the lifestyle of human beings. Virtual currency, digital coins originally designed for use online, has begun to be extensively adopted in real life. Because of the convenience of the Internet, various virtual currencies are thriving, including the most popular—Bitcoin, Ether, and Ripple [2]—the value of which has surged recently. People are beginning to pay attention to blockchain, the backbone technology of these revolutionary currencies. Blockchain features a decentralized and incorruptible database that has high potential for a diverse range of uses.

Blockchain is a distributed database that is widely used for recording distinct transactions. Once a consensus is reached among different nodes, the transaction is added to a block that already holds records of several transactions. Each block contains the hash value of its last counterpart for connection. All the blocks are connected and together they form a blockchain [1]. Data are distributed among various nodes (the distributed data storage) and are thus decentralized. Consequently, the nodes maintain the database together. Under blockchain, a block becomes validated only once it has been verified by multiple

1.3 Objectives

In this study, we developed a decentralized application and designed a certificate system based on E/thereumblockchain. This technology was selected because it is incorruptible, encrypted, and trackable and permits data synchronization. By integrating the features of blockchain, the system improves the efficiency operations at each stage. The system saves on paper, cuts management costs, prevents document forgery, and provides accurate and reliable information on digital certificates.

parties. Furthermore, the data in blocks cannot be modified arbitrarily. A blockchain-based smart contract, for example, creates a reliable system because it dispels doubts about information's veracity.

1.2 Rationale

Because information technology has developed rapidly in recent years, data protection is more necessary than ever. Graduates, whether they choose to continue studying or start job hunting, require various certificates for interviews. However, they often find that they have lost their educational and commendation certificates. Reapplying for hard copies can be time-consuming because certificates are granted by different organizations and in-person application may be necessary. By contrast, applying for an e-copy can save paper and time. By providing information for identity verification, graduates are able to apply for any certificate easily. Nevertheless, because of this convenience, forged degree certificates, licenses, and certificates are prevalent. Consequently, schools and companies cannot instantly validate the documents they receive [5]. To solve this problem, a certificate system based on blockchain was designed in this study. Data are stored in different nodes, and anyone who wishes to modify a particular internal datum must request that other nodes modify it simultaneously. Thus, the system is highly reliable.

II. EXISTING SYSTEM

The certificate are stored in centralized manner and verified manually, so it takes too much time to verify. There is no safety to the certificate that are given to any private sectors (banks).But,thedatas may be changed, deleted or modified. Certificates are easily hacked and make duplicate of that certificate. Students bring their certificates on interview places. There is no security for certificates.

Online Voting System Using Fingerprint Sensor

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---ABSTRACT---

Election is a process of selecting the right candidate to rule our nation. The voting system in India is insecure, because voters need to stand in a queue for a long time and the only security check is voter ID verification, which are fake nowadays. To overcome this we are introducing Online voting system which provides security, authentication, accuracy, flexibility and convenience to voters. It is a web application supported by all browsers. The admin stores the voter's details and their finger prints into the database before election to avoid duplication.

Keyword - SHTML, CSS, PYTHON, JAVA SCRIPT, JAVA, XAMPP.

I. INTRODUCTION

Voting schemes have evolved from counting hands in early days to systems that include paper, punch card, mechanical lever and optical-scan machines. An electronic voting system which is used nowadays provide some characteristic different from the traditional voting technique, and also it provides improved features of voting system over traditional voting system such as accuracy, convenience, flexibility, privacy, verifiability and mobility. But Electronic voting systems suffers from various drawbacks such as time consuming, consumes large volume of paper work, no direct role for the higher officials, damage of machines due to lack of attention, mass update doesn't allows users to update and edit many item simultaneously. The voting system in India is insecure, the only thing that the security checks is a voter ID card, which these days are faked nowadays. It is slow and counting the votes manually can take a long time. In some rural areas, where there is not much security available, polling booths are captured and often most ballots are destroyed. So, the development of such a system which is online will cut out these possibilities and many votes can be saved through this system even if such incidents occur.It is a web application supported by all browsers. The admin stores the voter's details and their finger prints into the database before election. So our Online System will ensure that only legitimate voters can cast their vote. This application also ensures that the voting is anonymous, the login will be successful only when the user finger print matches, then he can cast his vote for preferable candidate the interface is made as simple as possible with only basic functionalities.

II. EXISTING SYSTEM

The process of collecting data and entering this data into the database takes too much time and is expensive to conduct, for example, time and money is spent in printing data capture forms, in preparing registration stations together with human resources, and there after advertising the days set for registration process including sensitizing voters on the need for registration, as well as time spent on entering this data to the database. The process involves too much paper work and paper storage which is difficult as papers become bulky with the population size.

2.1 Disadvantages in Existing System

- Expensive and Time consuming.
- Too much paper work.
- Security is not provided for voters.

III. PROPOSED SYSTEM

In the proposed system, we provide user friendly interface which even helps the illiterates to cast their votes, and to avoid duplication by collecting finger prints. The development of such a system which is online will cut out these possibilities and many votes can be saved through this system even if such incidents occur. So Our Online System will ensure that only legitimate voters can cast their vote. This application also ensures that the voting is anonymous, the login will be successful only when the user finger print matches, then he can cast his vote for preferable candidate the interface is made as simple as possible with only basic functionalities. This system provides accuracy, convenience, flexibility, privacy, verifiability and mobility.

3.1 Advantages in Proposed System

- System provides secure login procedure.
- Nominees of respective wards can be viewed online.
- Unauthorized user has no access to the registered account.
- Reduces Time consumption.

IV. METHODOLOGY USED

- Admin module
- Voters module
- Security module

4.1 Admin Module

In this module, admin takes over control of login session of the voters, by entering the name, gender, age, address,

Sharing Sports Event Using Android Application

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--ABSTRACT--

Sports are very important for one's life and participation in sports should always be encouraged. Participation in sports makes us active, healthy, fit, and also the development of our social and communication skills. In existing system, there was no direct exposure between the coaches and the sports person. The sports person even unaware of the coaches of their related field.In this applicationthe sports person will get direct link with coaches and their events which is organized by the coaches. The NGO can view the coach and player details and they will display the best players and coach details. NGO can even add the sports kitdetails and can even sale the kit.

Keywords - Sports Events, Sports Information Management, Valuation System.

I. INTRODUCTION

The Ability to automatically identify important contents from lengthy sports video documents is a key technique in many important applications such as sports video index in, sports highlight generation, structural analysis, etc. Semantic sports video understanding also provides the fundamental technique for automatic sports video editing application which is becoming more and more popular in recent years. Such popularity comes with the advances in computer hardware and networking techniques which open up new perspectives in the distribution of audio/visual (A/V) content to public and home users. For example, users in near-future can expect the ability to re-edit existing videos to produce customized sports video segments for themselves. However, current production of such personalized sports video is difficult for both professional and amateur users for two reasons. First, the selections of suitable video segments from voluminous sports video documents is time consuming and labor intensive. SPORTS broadcasting is a billion dollar industry. Most professional sports are broadcast to the public on television, reaching millions of homes. The television experience differs in many ways from the live viewing experience, most significantly through its commentary. Much research has been done into the importance of commentary during sports broadcasting. When watching a game on television, "the words of the commentator are often given most attention" [10]. The commentary has the effect of drawing the attention of the viewer to the parts of the picture that merit closer attention, an effect called italicizing. Commentary can also set mood during a broadcast. A commentator who creates a hostile atmosphere during a broadcast often makes the viewing experience more enjoyable for the viewer.

II. LITERATURE SURVEY

2.1 The Development and Application of Valuation System on Competitive Sports Event

With some related researching materials and fixed the index factors of the valuation system on sport events, after comparing analyzing and synthesizing. I calculated the weight of each factor in valuation system and used AHPmethod to construct a judgment matrix according to the scored data. All the factors have been examined on conformance by calculating.The sport events have become an important part of people's daily life with the coming of information society and popularity of sports. The development and application of valuation system on sport events will contribute a lot to construct a comprehensive feedback system on sport events, promote sports development and improve the quality of people's life.The value of this study and the social appraisal framework based onit is used generally to testify some practical problems and is worthwhile to be popularized.

2.2 Digital Technology In The Application Of Sports Field

The literature research methods, induction of digital technology in the application of professional sports. Describe the selection of athletes for sports figures, professional training, teaching, and sports figure to provide a reference for further research.

2.3 Constructing Of Sports Information Management Theories And Developing Research Of Application System

In the sports management activities, decision and plan need information and in the process of organization and control also need information as the main basis. The whole process of sports management is the process of information processing. To effectively play the role of sports information resources, the sports information management has been proposed to be researched as an emerging discipline, which has the important practical significance on boosting the process of sports information and the development of sports information service industry and so on.

2.4 Mobile Personal Sports Activity Management App

In order to expect the effect of promotion of health through the activation of personal sports activity, scientific data management based onqualificationof personalsports activity is needed. However there is a lack

Computer Vision Based Text Scanners (Handwritten Character Recognition)

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---ABSTRACT--

Humans have unique handwritten styles which makes an obstacles to handwritten character algorithms very difficult. Till to date multiple researches are done on handwritten character recognition to identify the handwritten character styles. In most researches ANN (artificial neural network) has been used which gives an high accuracies. By using real time image processing this system can be implemented to apply multiple handwritten data for schools and universities.

Keywords - MATLAB C, OCR TRAINER, SEGMENTATION, CHRACTER RECOGNITION, ANN

I. INTRODUCTION

Handwriting recognition (or HWR) is the ability of a computer to receive and interpret intelligible handwritten input fromsources suchas paper documents, photographs, touch-screens and other devices. The image of the written text may be sensed "off line" from a piece of paper by optical scanning (optical character recognition) or intelligent word recognition. Alternatively, the movements of the pen tip may be sensed "on line", for example by a pen-based computer screen surface, a generally easier task as there are more clues available.Handwriting recognition principally entails optical character recognition. However, a complete handwriting recognition system also handles formatting, performs correct segmentation into characters and finds the most plausible wordsOff-line handwriting recognition involves the automatic conversion of text in an image into letter codes which are usable within computer and text-processing applications. The data obtained by this form is regarded as a static representation of handwriting. Off-line handwriting recognition is comparatively difficult, as different people have different handwriting styles. And, as of today, OCR engines are primarily focused on machine printed text and ICR for hand "printed" (written in capital letters) text.

II. EXISTING SYSTEM

Pattern Recognition provides the solution to various problems from speech recognition, face recognition to classification of handwritten characters and medical diagnosis. Handwritten Character Recognition involves recognition of handwritten numerals alphabets, symbol etc. In last few years, lots of work has been done by the researchers in the field of handwritten character recognition leading to formulation of efficient least time-consuming classifiers. Most of the times, we easily recognize characters despite the presence of inherent variability in size, slant and styles. But when it comes to implement an unconstrained handwritten character recognition system artificially it is not that much easy. By unconstrained we mean that there are inherent variations in style, thickness and size of the written character.

2.1 Disadvantage of Existing System

- Human errors are prone to arise
- Problem of over fitting

III. PROPOSED SYSTEM

The proposed project is to utilize a web camera to capture images of handwritten alphabets and numbers on the sheet, with an algorithm that has the capability to recognize handwritings and computerized numerals. In short, an intelligent neural network has to be developed for robust handwriting recognition of the numbers from the webcam to be able to be input into a database. The neural network method will be deeply explored to obtain the optimal solution with the lowest overshoot and errors.

3.1 Advantages Of Proposed System

- Implemented to apply multiple handwritten
- Proposed methods also solve the problem of over fitting

IV. METHODOLOGY USED

- Preprocessing
- Character Edge Detection
- Future Extraction
- Classifiers

4.1 Preprocessing

Data pre-processing is an important step in the data mining process. The phrase garbage in garbage out is particularly applicable to data mining machine learning projects. Data-gathering methods are often loosely controlled, resulting in out of range values impossible data combinations, missing values, etc. Analysing data that has not been carefully screened for such problems can produce misleading results. Thus, the representation and quality of data is first and foremost before running an analysis. Often, data pre-processing is the most important phase of a machine learning project, especially in computational biology.

4.2 Character Edge Detection

Efficient Farming – Hiring Equipments for Farmers

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---ABSTRACT---

In order to improve the economy of India, agricultural growth needs to levitate. This demands small and marginal scale agriculture to become efficient and self-sustaining. A mobile application that the farmers can use to hire tractors as well as other mechanizations at a nominal amount all using their mobile phones. This would not only help them avoid manual labor but can be also be considered as an important step to encourage this profession. Using kiosk software for farmers to hire farming equipment like tractors and other machines. We proposed a system to make the farmers aware of the current market rate of the product. This type of system is much beneficial for the young generation to adopt to the traditional farming technique. It will increase the easy access to farm mechanization solutions through rental of tractors and farm equipment for small and marginal farmers. The benefits of our project is Avoid bidding problem and Cost is not the issue because of the mobile based application.

Keywords - Hiring, Market rate, Bidding, Self-sustaining.

I. INTRODUCTION

To increment food production and productivity one of the required elements for such development is the adoption and usage of 'power technologies', for example such as animal muscle (oxen) and engines (tractors), and related equipment, such as for example no-till planters and improved hand tools. Most of the small and marginal farmers do not invest in mechanization due to related huge expenses of buying these machines. This lack, well recognized by both the public and private sectors for decades now, fostered the development of agricultural mechanization hire enterprises, more commonly known as hire services, that could potentially provide power technologies and equipment on a hire basis, where farmers could pay in cash or more commonly in kind. The selection of variables is dependent on the location for which the predication is to be made.

II. RELATED WORKS

Small-scale actors in agri-food value chains: The services of agricultural mechanization hire enterprises." by Martin Hilmi Volume : 07 Issue : 04 | Oct.-Dec. 2018.Agricultural mechanization hire enterprises, commonly known as hire services, are service businesses that provide human, animal and mechanical-driven power technologies and equipment services. This article is based on qualitative based descriptive and explanatory research. The outcome of the research found that personal, entrepreneurial, social and brokerage services factors are to be considered alongside the financial/commercial aspects for a better understanding of the how and why of access and use of such services by small-scale actors.

III. PROBLEM IDENTIFICATION

Rural people depend heavily upon agriculture either as farmers, casual laborers, workers in agro-based industries traders in agricultural produce or as hire service providers. One of the principal causes of poverty among smallholder's farmers is the lack of farm power and importantly access to it. Most of the small and marginal farmers do not invest in mechanization due to related huge expenses of buying these machines. This would not help to avoid the manual labor. The disadvantages are external hardware is used and very expensive.

IV. PROBLEM SOLUTION

A mobile application that the farmers can use to hire tractors as well as other mechanizations at a nominal amount all using their mobile phones. This would not only help them avoid manual labour but can be also be considered as an important step to encourage this profession. It will increase the easy access to farm mechanization solutions through rental of tractors and farm equipment for small and marginal farmers.We proposed a system to make the farmers aware of the current market rate of the product. The farmers were allowed to use his mobile to pay for the rental . SMS support for payment transactions also has to be supported. SMS/Notification will be send once the transaction is complete.This type of system is much beneficial for the young generation to adopt to the traditional farming technique. The benefits of our project is Avoid bidding problem and Cost is not the issue because of the mobile based application.

Three Layer Privacy Preserving Using Fog Computing

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---ABSTRACT---

Fog computing is an architecture that uses edge devices to carry out a substantial amount of computation, storage, communication locally and routed over the internet backbone. The development of cloud computing technology with the explosive growth of unstructured data, cloud storage technology gets more attention and better development.The cloud provider does not have suggestions regarding the information and the cloud data stored and maintained globally anywhere in the cloud. The privacy protection schemes are usually based on encryption technology. A three-layer storage framework based on fog computing. The proposed framework can both take full advantage of cloud storage and protect the privacy of data. Here we are using hash- solomon code algorithm is designed to divide data into different parts. In this framework we are using bucket concept based algorithms to secure the data information and using BCH code algorithm for error-correcting cyclic problem.Based on computational intelligence, this algorithm can compute the distribution proportion stored in cloud, fog, and local machine, respectively.

Keywords - Hash-solomon code, Fog computing, cloud computing, bucket framework

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I. INTRODUCTON

In Computer science, cloud computing describes a type of outsourcing of computer services, similar to the way in which electricity supply is outsourced. Users can simply use it. They do not need to worry where the electricity is from, how it is made, or transported. Every month, they pay for what they consumed. The idea behind cloud computing is similar: The user can simply use storage, computing power, or specially crafted development environments, without having to worry how these work internally. Cloud computing is usually Internet-based computing. The cloud is a metaphor for the Internet based on how the internet is described in computer network diagrams; which means it is an abstraction hiding the complex infrastructure of the internet. It is a style of computing in which related capabilities are provided "as a service", allowing users to access technology-enabled services from the Internet ("in the cloud") without knowledge of, or control over the technologies behind these servers.

Fog computing can be perceived both in large cloud systems and big data structures, making reference to the growing difficulties in accessing information objectively. This results in a lack of quality of the obtained content. The effects of fog computing on cloud computing and big data systems may vary. However, a common aspect that can be extracted is a limitation in accurate content distribution, an issue that has been tackled with the creation of metrics that attempt to improve accuracy. Fog networking consists of a control plane and a data plane. For example, on the data plane, fog computing enables computing services to reside at the edge of the network as opposed to servers in a data-center. Compared to cloud computing, fog computing emphasizes proximity to end-users and client objectives, dense geographical distribution and local resource pooling, latency reduction and backbone bandwidth savings to achieve better quality of service (QoS) and edge analytics/stream mining, resulting in superior user-experience and redundancy in case of failure.
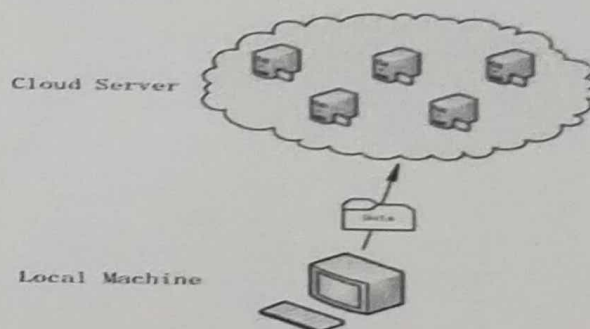
II. EXISTING SYSTEM

Fig1. Traditional cloud storage structure

In existing system, data has been partitioned and stored in three storage servers such as cloud server, fog server and local server by hash- Solomon code algorithm. One important thing is that the third party don't have the knowledge about our data partitioning. The Cloud server contains 80% of unimportant information, the Fog server contains 15% of most important information and the Local server contains 5% of important information. If hacker hacks the data in any one these layers either he/she will modify the data or delete the data. Hence the user will loose that data. This is the major disadvantage.

Estimation and Prediction of Diabetes Mellitus Using Association Summarization Techniques

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---ABSTRACT---

Diabetes Mellitus is a chronic disease, in extreme cases it may leads to death. The growth of Diabetic patients are increasing day by day due to various causes such as obesity, bad diet, pollution etc. In Health Care Systems, the diagnosis of Diabetes has been comprehensively investigated showing acceptable levels of accuracy. Our motive is to design a model which can prognasticate likelihood of Diabetes in patient's with maximum accuracy. The data set taken from PIDD are used as train data and data collected from hospitals are taken as test data. The objective of the project is to predict the diabetes using data mining algorithms and to compare its accuracy. Performance comparison of Decision tree, Naïve Bayes, SVM algorithms has been done on Pima Indian Diabetes Dataset. The highest accuracy measure was calculated using instances.

Keywords - Diabetes, accuracy, Naïve Bayes, Decision Tree, SVM.

I. INTRODUCTION

Diabetes is a heterogeneous group of diseases characterized by chronic elevation of glucose in the blood. It arises because the body is unable to produce enough insulin of its own needs, either because of impaired insulin secretion, impaired insulin action or both. The three classic symptoms of Diabetes are thirst and weight loss. The number of people with Diabetes has risen from 108 million in 1980 to 422 million in 2018. Data sets involving Artificial Intelligence, Machine Learning, Statistics and Database Systems. Its main aim being to extract information from a data set and transform it into a understandable structure for further usage.

II. MOST COMMON TYPES

2.1 Type 1 Diabetes

A chronic condition in which the pancreas produces little or no insulin. It usually starts in childhood or young adulthood. It happens when your immune system destroys cells in your pancreas called beta cells. This condition cannot be cured.

2.2 Type 2 Diabetes

A chronic condition that affects the way the body produces blood sugar(glucose). The body either does not produce enough insulin, or it resists insulin. It can develop at any age and usually discovered during adulthood.

2.3 Type 3 Diabetes

A form of high blood sugar affecting pregnant women. A blood sugar test during pregnancy is used for diagnosis.Those who develop gestational diabetes are at the high risk of developing type 2 diabetes. Treatable by a medical professional.

III. OVERVIEW

3.1 Dataset

The proposed system is processed on PIDD which is taken from UCI repository. The dataset contains 8 attributes which includes blood pressure, skin thickness, BMI, diabetic pedigree function, age, insulin, number of pregnancies, glucose.

0= tested negative

1= tested positive

IV. PROPOSED SYSTEM

In this system we focus in Electronic Health Records(EHR) to discover set of risk factors that represents a patients with the risk of developing diabetes. In our proposed model we compare the accuracy of prediction algorithms in data mining. Accuracy can be calculated using Precision, F-measure and Recall values. Naïve Bayes classifier reduces the misclassification rate.
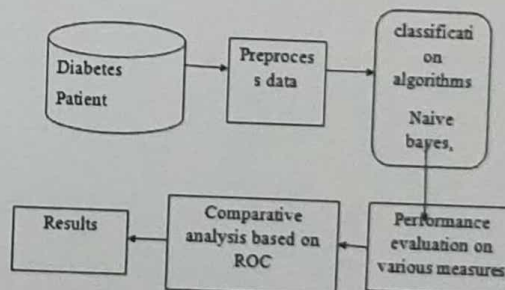
Secure Intra-Communication Information Authority in Organization

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---ABSTRACT--

Group data sharing in cloud environments has become a hot topic in recent decades. Group data sharing in cloud is a technique that allows users to conveniently access dataoverthe cloud. An organization is an entity comprising multiple people, such as an institution or an association, that has a particular purpose andgrouping related functions into manageable units to achieve the objectives of the enterprise in the most efficient and effective manner. Daily report which is stored in cloud enables the team manager to have an overview how the team's project is progressing in terms of each team member's individual tasks without having to talk to each one on a daily basis. In Proposed work, whatever the employee work as a task is automatically create as a PDF file and it will not be rewrite by anyone and daily updating has been updated to the particular file. For accessing the pdf file by team leader, the captcha has been generated to mostly avoid the automatically harvesting the details. If HR Manager wants to see the daily update of the Team Leader, then the QR code has been generated and scanned by them to get access to the file.

Keywords - **Group data sharing, daily report, PDF, QR code.**

I. INTRODUCTION

Cloud computing and cloud storage have become hot topics in recent decades. Both are changing the way we live and greatly improving production efficiency in some areas.Cloud computing describes a type of outsourcing of computer services, similar to the way in which electricity supply is outsourced. Users can simply use it. They do not need to worry where the electricity is from, how it is made, or transported. Every month, they pay for what they consumed. The idea behind cloud computing is similar: The user can simply use storage, computing power, or specially crafted development environments, without having to worry how these work internally. Cloud computing is usually Internet-based computing. Cloud is a metaphor for the Internet based on how the internet is described in computer network diagrams; which means it is an abstraction hiding thecomplex infrastructure of the internet.These services are broadly divided into threecategories: Infrastructure-as-a-Service (IaaS), Platform-as-a-Service (PaaS)and Software-as-a-Service (SaaS).At present, due to limited storage resources and the requirement for convenient access, we prefer to store all types of data in cloud servers, which is also a good option for companies and organizations to avoid the overhead of deploying and maintaining equipment when data are stored locally. The cloud server provides an open and convenient storage platform for individuals and organizations, but it also introduces security problems. For instance, a cloud system may be subjected to attacks from both malicious users and cloud providers. In these scenarios, it is important to ensure the security of the stored data in the cloud. In several schemes were proposed to preserve the privacy of the outsourced data. The above schemes only considered security problems of a single data owner. However, in some applications, multiple data owners would like to securely share their data in a group manner.
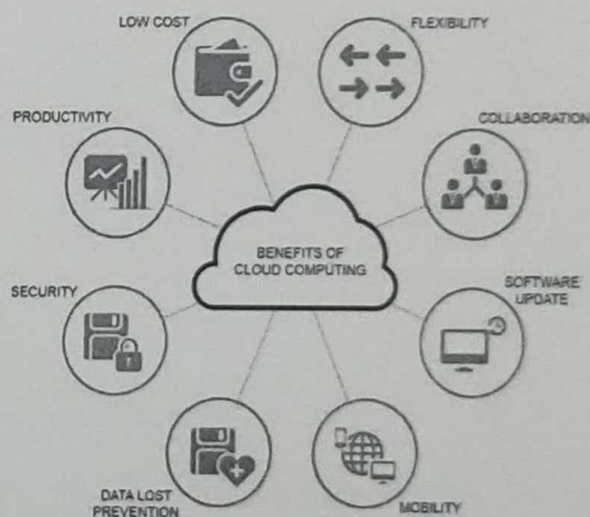

Fig 1. Benefits of cloud computing

II. EXISTING SYSTEM

In existing system, the employee has to update their daily work and also if they have to send any information means they have to go and inform to their particular HR manager

Ambulance Service Using Android Application

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------ABSTRACT------

Initially the ambulance driver did not know the exact location of the accident spot because of the heavy traffic due to this we cannot save many people's life. By current technology era everything runs on smart phones and applications so we created an mobile application by live tracking of ambulance service .This app will have ambulance driver's register their availability and location. Either executive emergency helpline or user's on client side will book an ambulance and the user login .The user's location will be pin pointed on the Google map and even the ambulance which is nearby the user will be pin pointed on the map , once the patient is on board the ambulance location is pointed and it will send to the admin this location will be shared to ambulance driver and then the list of hospitals are pointed out on the map which helps the admin to choose the nearby hospital to take the patient on time .The ambulance location is tracked by the navigator geolocation method based on Rest FUL Web Services .This technique will help the ambulance location to be updated in the database . Moreover the ambulance driver can control the traffic signals by the upcoming ambulance route by changing red to green signal.

Keywords - Rest FULL Webservice, Navigation, Geolocation.

I. INTRODUCTION

With current technology era where mostly everything runs on smartphones and applications, the need of quick and efficient services are almost important in every aspects especially when it comes to medical services. Patients are mostly having issues on handlingthe locations and searching of ambulance their availability due to limited service in the time of emergency .The lack of such attention and information may lead to several casualties .The question arises where the user have to find ways to check the availability for theambulance to find the user's precise location in the quickest time . Thus the ambulance driver have to provide proper information and location . So both the user and ambulance driver won't get lost or by searching each other .The main aim is to reduce the time of calling the fraud calls and to allow ambulance driver to locate the victim easily by using GPS signal.

II. RELATED WORKS

[1] "Automatic Ambulance Rescue System Using Shortest Path Finding Algorithm." by P.Arunmozhi and P.Joseph William Volume: 07 Issue:04 |Oct.-dec.| 2018
Traffic congestion and tidal flow management were recognized as major problems in modern City areas, which have caused much uncomfortable for the ambulance. Moreover accidents in the city have been nonstop and to bar the loss of life due to the accidents is even more Complexity . To implement this scheme called AARS (Automatic ambulance rescue system). The main Function behind this scheme is to provide a smooth flow for the ambulance to enter the hospitals in time and thus minifying the Practical Implementation. The idea behind this scheme is to implement a ITS which would control mechanically the traffic lights in the path of the ambulance. The ambulance is controlled by the MCU which furnishes the most scant route to the ambulance and also controls the traffic light according to the ambulance location and thus reaching the hospital. The server also determines the location of the accident Place through the sensor systems in the vehicle which encountered the accident and thus the server walks through the ambulance to the Exact Place. This scheme is automated, thus it finds the accident Place, controls the traffic Signals, helping to reach the hospital in time.

III. PROBLEM IDENTIFICATION

In the existing system , there was no correct booking of ambulance and driver faces the difficulty to reach the accident spot in short time due to heavy traffic so that will take a lot of time to reach the hospital. Due to this many people mayloss their lives or is in trouble due to heavy traffic.This system would not help the ambulance to reach the hospital in short time.

IV. PROBLEM SOLUTION

A mobile application that the users can usefor booking an ambulance, by this user can send accident location to admin them admin get address of received GPS co-ordinate from the user side. This location will be shared to the ambulance driver .Then ambulance driver will reach the spot.Then Ambulance driver will send notification to admin and then admin will send location of near by hospital to the driver where he has to reach.The driver can

Expenses Management System

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--ABSTRACT--

People do not have track on their monthly expenses and receivables and they do not have any control on what they spend.Developing an application which will be able to keep track on expenses and receivables can solve this problem.To manage our monthly expenses we designed a mobile application. Whatever we spend monthly or daily will be recorded in this application. And it is used to manage our monthly expenses.User can enter their limited budget of the entire month in this mobile application where when the user exceeds their given budget in the respective month will be notified through Expenses Management System Application. And also some mathematical calculations are done to calculate the expenditure on what items users spend a lot and users will be notified that they are spending a lot of amount on the respective item so that they can reduce their expenditure on that item in future.OAuth for authentication via social logins and firebase authentication for respective accounts and firebase, firestore for storing and retrieving respective users data is implemented and Chabot is also included.

Keywords - **OAuth, Google Api, Facebook Api, Twitter Api, Firestore.**

I. INTRODUCTION

The Expense Management is a mobile application intended to run on android device namely smart phone. Expense Management Systemis designed to efficiently cater the needs of users by eliminating imparting costs and settling vows to friends. The application encourages corresponding users help in who owes who, and for what. Aim is use better approaches to help users and their companions to share expenses easily. This new application will let bunch users and their companions to have detailed view inside this application around individual costs.The app allows its users to add a remark to an expense, click on the expense name in any expense list.Users can enter their expenses which they are spending daily or weekly basis. Hence it makes them to keep track on their expenses. Users can also enter the receivables which they are supposed to receive. Expenses Viewing list is enabled where user can view the expenses list which they have entered earlier. Along with the expenses title users can also add the image attachment of their bill.

The Expense Management has notification option to notify each time somebody adds a remark to an expense user is on, or user can withdraw to posted bill. Some of the concerns related dividing expenses are like maintaining personal expenses is a big problem, splitting the expenses among group is confusing. Some of the conventional methods used to tackle this problems in normal circumstances are like making use of a sticky note by normal users, Proficient people deal with this kind problems by using spreadsheet to record expenses and using a ledger to maintain large amounts data by especially by experts. As this show that it is variable methods used by different people. This make using this data inconsistent.We believe a handy design a handy mobile application which handles these problems.Such that app is capable of recording the expenses and giving comprehensive view with easy to use user interface.

II. EXISTING SYSTEM

In existing system, a mobile application is developed where the user can add the expenses and their receivables to the application. They can view the expenses which they have added earlier. There are no any social authentications for easy logins in the existing system. In the existing system user can only add the expenses by typing it manually, where there is no any option for the addition of image from camera or gallery which is the major disadvantage of the existing system. No any notifications will be given which is of no use in the existing system. No any explicit system for budget calculation.

III. PROPOSED SYSTEM

In the proposed system we are going to add additional features on such as we are going to integrate image attachment from gallery and chatting feature.OAuth via social logins is included where user can easily login and make use of this application. Image view for viewing the expense or receivables , hence they can easily track their expenses. An explicit system for budget calculation is included where notifications will be sent to the user if they exceed the expenditure of that month or that day. Users can also enter the receivables which they are supposed to receive. Expenses Viewing list is enabled where user can view the expenses list which they have entered earlier. If the user spends so much of amount on a particular item then users get notification on what items they spend more and also some recommendation to reduce their expenditure.

Stock Management in Restaurants

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-----ABSTRACT-----

Stock Management in restaurants is done in a manual way where a person updates the product details. The product details are updated by entering the details of the product to the database. There is no advanced techniques in updating the stock. We are developing a stock management system using voice recognition. The voice will be converted into text and this will be updated in the database. This makes a person to use the system easily and effectively.

Keywords - *voice recognition, stock updation.*

I. INTRODUCTION

In recent times the technology has improved a lot such that most of the products that we use today is user friendly. The man power has been reduced drastically by using advanced technologies in various industries. For example the testing part in programs are mostly done through automatic systems in the industry. But according to stock management a person is required to check for the products and update them manually. There are no advanced techniques that has been introduced to reduce the man power and errors which occur commonly in most of the restaurants and supermarkets. There are many disadvantages in the existing system like

- the person can update the wrong details in the system
- any theft may occur.

Also a psychology studies say that nearly 46 % of the workers commit any kind of mistake most often. Here we are developing a system which overcomes these errors and provides a stock management system with good efficiency.

II. EXISTING SYSTEM

The system present now requires a person to manually update the system. Like mentioned earlier there are many errors which can occur commonly.

III. PROPOSED SYSTEM

Here we are developing a system in which we can update the product details in the database through voice commands. In our system a user has to login into the system using the personal details. Later they can update the details of the product by giving the voice commands to the system. These details are updated to the database.
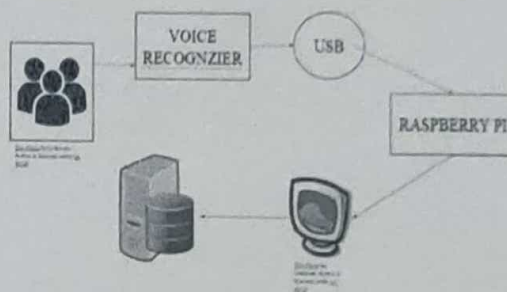

Fig 1

This is the architecture of the system we are developing. In this system the user is first recognized as authorized person. Then the voice commands are recognized through the voice recognizer. Later it is updated to the system database.

IV. METHODOLOGY

4.1 Voice Recognition

Voice recognition is the computer analysis of human voice especially for the purpose of identifying the user voice and the commands issued by the user. It is program to identify the words and phrases in spoken language and converts it into machine readable format. Voice recognition is used very prominently in recent times and has gained a lot of scope. People use voice recognition more often in systems like amazon alexa, google home, also in mobile phones like siri. This enables the user to interact with the system through speech. Voice recognition in systems captures theanalog signals of the user's sound waves and converts them into digital signals. This conversion of the signal is done using aanalog to digital convertor. This makes it very easy for the user to use the system.

Object Recongition and Distance Finding Using Convolutional Neural Network for Blind People

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-----------ABSTRACT-----------

In light of a legitimate concern for ongoing achievements in the advancement of profound convolutional neural systems (CNNs) for object identification and acknowledgment assignments, another profound learning based article acknowledgment is proposed. An Artificial Neural Network (ANN) is an innovation which used to process the data design, which is motivated by the way organic sensory systems, for example, neurons in the memory, process data. The key component of this example is the novel structure of the data preparing framework. By having the Microsoft coco(common object in setting), it is a substantial scale object recognition, division, and inscribing dataset. In Microsoft coco, it present a point by point measurable examination of the dataset in contrast with PASCAL, ImageNet, and SUN. One ofthe most prevalent kinds of profound neural systems is known as convolutional neural systems (CNN). Prior to going before the pictures for acknowledgment, each gathering is named with the remarkable name in light of the fact that here we are utilizing the directed learning. So as to decide the separation from our camera to a known item or marker, we are going to utilize the model of triangle likeness.. It is only, utilizing the normal yield, the prepared model is readied. Utilizing the idea of triangle likeness we locate the surmised separation from the article from the camera. gTTS (Google Text-to-Speech), it is an utilized as a python library and CLI interface with google decipher. Its principle highlight is Customizable content pre-processors which can give a reasonable articulation.

I. INTRODUCTION

One of the essential objectives of PC vision is the comprehension of visual scenes. Scene understanding includes various undertakings including perceiving what objects are available, restricting the items in 2D and 3D, deciding the articles' and scene's qualities, describing connections among items and giving a semantic description of the scene. The current object classification and discovery datasets help us investigate the first challenges identified with scene understanding. For example the ImageNet dataset, which contains a phenomenal number of pictures, has as of late empowered achievements in both item classification and discovery inquire about, the people group has additionally made datasets containing object qualities, scene properties, keypoints, and 3D scene data.

The Microsoft Common Objects in COntext (MS COCO) dataset contains 91 basic item classes with 82 of them having in excess of 5,000 named examples, Fig. 6. Altogether the dataset has 2,500,000 marked examples in 328,000 pictures. Rather than thewell knownImageNet dataset, COCO has less classifications however more occurrences per class. This can help in learning point by point object models equipped for exact 2D confinement. The dataset is likewise significantly bigger in number of occasions per class than the PASCAL VOC and SUN datasets. Furthermore, a basic refinement between our dataset and others is the quantity of marked occurrences per image which may aid in learning contextual information, Fig. 5. MS COCO contains extensively more article examples per picture (7.7) when contrasted with ImageNet (3.0) and PASCAL (2.3). Conversely, the SUN dataset, which contains significant logical data, has more than 17 articles and "stuff" per picture however impressively less item occurrences in general.

II. RELATED WORK

Picture Classification The undertaking of article classification requires parallel names showing whether objects are available in a picture. Early datasets of this sort included pictures containing a solitary article with clear foundations, for example, the MNIST transcribed digits or COIL family unit objects . Caltech 101 and Caltech 256 denoted the change to progressively practical item pictures recovered from the web while likewise expanding the quantity of article classes to 101 and 256, separately. Famous datasets in the machine learning community due to the larger number oftraining precedents, CIFAR-10 and CIFAR-100 offered 10 and 100 classes from a dataset of minor 32×32 pictures . While these datasets contained up to 60,000 pictures and many classifications, they still just caught a little portion of our visual world. As of late, ImageNet made a striking takeoff from the gradual increment in dataset sizes. They proposed the production of a dataset containing 22k classes with 500-1000 pictures each. Not at all like past datasets containing passage level classifications , for example, "canine" or "seat," like, ImageNet utilized the WordNet Hierarchy [30] to get both section level and fine-grained classifications. As of now,

Patient Health Care Detector

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--------ABSTRACT--------

Now a day Humans are facing many problems in lack of medical care to patient at right time.During treatment, it is highly important to continuously monitor the patient. In this system a patient will be carrying hardware having sensors ,the sensors will sense the body temperature, heart beat rate,ECG,Spo2 and these data is transferred to Adafruit cloud via Wi-Fi Module. System has the cloud database which stores all information about patient's health and the doctors will prescribe medicine using this information stored on cloud. The Proposed System uses Arduino Board as an IOT device that interfaces three sensors and read the patient health parameters. The three sensors: pulse sensor kit, blood pressure sensor kit and temperature sensor kit sense the patient health parameters and the output of each sensor kit is given as input to the Arduino board. The Arduino sends the data to cloud database (Adafruit), analyze and visualize the normal readings.

Keywords- Internet Of Things, Heart rate sensor, Body temperature sensor, ECG, SPO2, Adafruit.

I. INTRODUCTION

Proposed system introduces measurement of patient's health parameters using the sensors. If we connect asensorto patient's body it will sense health parameter such as temperature, pulse rate, ECGand SPO2 using this observing the patient continuously and send the datato the doctor. In Order to solve health issues the patient have to monitor continuously, the patient health details in periodic interval is necessary in existing technologies. However, existing works lack flexibility, scalability, aniciency. Using Adafruit or his caretakers can view the patient health status. The aim of this research is to provide a medical monitoring such as the heartbeat, body temperature, ECG, SPO2 for the individual at any time and any place. Here sensors are used to sense the parameters of the human body, the sensed outputs from the sensors are then sent to the Arduino.This system is very effective in monitoring a person's health continuously because it is fully automated. It can be tested very easily with any person.

II. EXISTING SYSTEM

In the existing system, The sensors are attached to the body of the patients without causing any discomfort to them. In PMS monitor the important physical parameters like body temperature, ECG, heart beat rate and blood pressure using the sensors which are readily available. Thus, the analog values that are sensed by the different sensors are then given to a microcontroller attached to it. The microcontroller processes these analog signal values of health parameters separately and converts it to digital values using ADC converter.

III. DRAWBACKS

- One way communication.
- Diagnosing with help of a doctor

- Conventional devices that can only measure a particular parameter
- Devices that have to be connected invasively to get measurements
- No automated system exists.

IV. PROPOSED SYSTEM

The Proposed Patient Monitoring System with two-way communication i.e. not only the patient's data will be sent to the doctor through SMS and email on emergencies, but also the doctor can send required suggestions to the patient or guardians through SMS or Call or Emails and also connected to the cloud database(Adafruit).

V. MERITS

- Intelligent system based patient health detection system for 24/7 online doctors/prescription.
- Bridging the gap between the doctor and the patients.
- Best to be used on rural areas, easy to operate.
- Better monitoring about the patient health.
- Precaution about early morning heart attack can be easily identified and intimated.

VI. MODULES

The system functionality is divided into major three modules; They are:
- Sensing Module
- Checking Module
- Interaction Module

6.1. Sensing Moduling

The Sensors being
- Pulse Sensor
- Temperature Sensor
- Wi-Fi Module

Pulse Sensor: The Heart Beat Sensor provides a simple

Citizen Information Feedback of Maintenance of Road (CIFOMOR)

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Abstract: When people come across certain damages caused in their environment they don't know whom to approach or where to approach such that, they would leave it to be unnoticed which might lead to several accidents.
In order to overcome these sorts of issues we have developed our mobile application such that every user can raise complaints regarding the issues that they come across and can get to know about the action took with respect to their queries.
Keywords: Road Maintenance, Android App, Feedback, Environment Issues, Forum.

I. INTRODUCTION

This application provides an effective way of getting connectivity with the authorities who are responsible for maintaining the ecosystem. It also provides other users to vote how important the issue tends to be.

This application requires registration of users, such that no anonymous person can post unwanted posts. Registering in this application requires doesn't involve in getting any personal information except their mail address. The application makes the post's visibility to be public, such that any issue raised by anyone is open to be solved by anyone. Apart from that every user has the privilege.

A. Existing System

There is an application called Meri Sadak which requires many personal information for users who logs in.

1) *Disadvantages In Existing System*
a) One of the major issue is that it isn't active.
b) Many unwanted mandatory fields where present in the application.
c) The issues raised is not publicly visible such that it doesn't encourage other users to raise issues.
d) User needs to undergo several process to provide their issue.

B. Proposed System

The system poses different type of approach towards the users of this application. Every user are made to easily post their issues that they come across.

A. Advantage In Proposed System
a) Doesn't require any personal information of the user.
b) The posts are made publicly visible.
c) Vote on the other issues that are raised to denote severity.
d) Users can post their issues once they enter their credentials.

Deep Learning Model for Motion Video Processing

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Abstract: In the film industry for motion picture processing, it requires different rate (fps) of motion capture. Utilizing single sequence compromises on quality. Different frames are required to be inputted to video editing tools as per motioning requirements. The goal of the paper is to construct a model to utilise the captured frame sequence and generate slow motioning using clustering and Convolutional Neural Networks.
Keywords: Deep Learning, Convolutional Neural Networks, Video Processing, Segmentation, Motioning

I. INTRODUCTION

In the film industry for motion picture processing, it requires different rate (fps) of motion capture. Utilizing single sequence compromises on quality. Different frames are required to be inputted to video editing tools as per motioning requirements. The goal of the paper is to construct a model to utilise the captured frame sequence and generate slow motioning using clustering and Convolutional Neural Networks.

II. PROBLEM IDENTIFICATION

The major problem in the filming industry is to generate slow motioning with existing sequence of frames. With slow motion capture it is possible to generate fast motion by removing the intermediate frames. It is possible to generate slow motioning from fast motion capture by inserting intermediate frames, but it experiences jitters and jerks during the final rendering. This problem is seen in the video editing tools like Adobe Premier Pro, Avid Media Composer.

III. PROBLEM SOLUTION

Despite there is not a complete solution for the problem, the model can be trained so that the jitters and jerks can be minimized to certain extend. The deep learning model uses clustering mechanism to group the similar set of frames. The duplicate frames are identified using Deep Neural Networks for unstructured data. They are further grouped together and then they are ordered .The sequence is then fed into the tool to render the final output. The final output is the slow motion video. The final output will have less distortion when compared with regular video editing tools. The accuracy of the model depends upon the training of the model.

IV. DISADVANTAGES IN THE EXISTING SYSTEM

The existing video editing tools will experience jitters and jerks during the final rendering of the output. The distortion experienced in the final rendering of the output is a major problem experienced in video motioning

V. CLUSTERING

The similar set of frames that are recognized are grouped together .Clustering is done on the similar set of frames or identical frames that was detected using the Deep Neural Networks from the pixel data. Clustering is basically grouping the images based upon the similarity in the patterns. This helps in discovering the patterns in the underlying data. It is based upon the distance metrics and similarity. It calculates the data points at each position and measures the similarity. The primary aim is to partition, segregate various different data and group the similar ones. Few partition algorithms are very dynamic such that they easily transit from one cluster to another. They gain knowledge through the prototypes and through the size and shape of the clusters.

VI. ARTIFICIAL NEURAL NETWORKS

Artificial Neural Networks are the model adapted from the biological Neural System. It consists of a large number of interconnections and nodes. Each of the nodes is addressed as neurons capable of computation. The computation is performed from the inputs and the nodes are trained by collective way of learning in order to optimize the final output .The input is taken in the form of a multi dimensional vector and the data is travelled across the hidden layers.The hidden layers improvise the decisions based upon the previous layers. These hidden layers are stacked upon each other.This is how the Deep Learning process takes place.The Artificial Neural Network has a high computational complexity, so it finds hard to compute the image data and also to store them.

Smart and Dynamic Time Table Generator

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Abstract: The manual operation of the timetable preparation in college is very monotonous, time consuming and very difficult process.

Due to its static approach the resource utilization is made ineffective by resulting two or more staff ending up in the same class or single staff is allocated to more than one class which leads to the conflict between the staff. In order to reduce this defect we use genetic algorithm to generate a dynamic timetable. Based on the input details such subjects, batches, staff details, timing details and priority of the subjects a static timetable is generated. And when the presence of the staff is given as an input, then a dynamic timetable is generated in the system.

Keywords: Genetic Algorithm, priority of subjects, dynamic time table.

I. INTRODUCTION

The manual operation of the timetable preparation in college is very monotonous, time consuming and very difficult process. Due to its static approach the resource utilization is made ineffective by resulting two or more staff ending up in the same class or single staff is allocated to more than one class which leads to the conflict between the staff.

In order to reduce this defect we use genetic algorithm to generate a dynamic timetable. The genetic algorithm uses three main operators such as selection, mutation and crossover in order to generate a well-formed dynamic timetable. This algorithm will automatically regenerate, each time of its processing, though there is no changes in the given input. Based on the input details such subjects, batches, staff details, timing details and priority of the subjects a static timetable is generated. And when the presence of the staff is given as an input, then a dynamic timetable is generated in the system.

II. LITERATURE REVIEW

A. Class Teacher problem Implementation

The simulated annealing was chosen by Abramson to solve the timing problem. His implementation always picks the new solution if its quality is better than the current one If the solution is worse, the probability of picking equals:

$$P(Ac)=e(Ac/T)$$

The temperature level is changed after the fixed number of successful swaps. The solution is stored in the set of lesson list.

III. GENETIC ALGORITHM

A genetic algorithm is a metaheuristic inspired by the process of natural selection that belongs to the larger class of evolutionary algorithm. It is commonly used to generate high quality solutions to optimization and search problems. It uses three main operators such as mutation in which is used to get a better solution with mutual probability. Then selection process which is used to sort the given details based on the specified constraints. Then crossover it is used to combine the genetic information to generate a new optimized solution.

IV. WORK OF GENETIC ALGORITHM

Genetic algorithm is a search heuristic algorithm. This algorithm begins by creating a random initial population. The standard procedure is, "if you meet this condition, act like that". However, no matter how much of work you pour into this method, the final solution will never be able to outsmart its creator.

To avoid this, a new idea called Genetic Algorithms was developed. Before learning what Genetic Algorithm is, let us first understand the theory behind it, the theory of natural selection by Darwin. The theory is simple: If a population want to thrive, it must improve by itself constantly, it's the survival of the fittest. The best element of the population should inspire the offspring, but the other individuals must not be forgotten in order

Estimation and Prediction of Diabetes Mellitus using Association Summarization Technique

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Abstract: Diabetes mellitus is the one of the world's major diseases which causes increases in blood sugar level. The risk of diabetes is increasing day by day, and many complications may occur if diabetes remains untreated and unidentified. The diagnosis of diabetes is tedious process. But the rise in machine learning approaches solves this critical problem. Machine learning classification algorithms are used in this model to detect diabetes at early stage. The performance of algorithms are measured using Precision, Accuracy, F-measure, and Recall. These results are verified using ROC curve in a proper and systematic manner.

I. INTRODUCTION

Diabetes is metabolic disease which affects the ability of the body in producing hormone insulin, which in turn raise the levels of glucose in the blood. In diabetes a person generally suffers from high blood sugar. Intensify thirst, Intensify hunger and frequent urination are some of the symptoms caused due to high blood sugar. The disease is of three types: insulin-independent, insulin-dependent and gestational diabetes. The insulin-dependent is known as Type 1 DM which is due to lack of insulin production. This is mostly seen in children. The insulin-independent also known as Type 2 DM, is due to the failure of cells to respond to insulin produced. People who have obesity will have type 2 diabetes. The third type which gestational diabetes occurs in women during gestation period. Blood pressure, plasma glucose may the reason for diabetes.

Many researchers are conducting experiments for diagnosing the disease using various classification algorithms of machine learning approaches and then machine learning algorithms works better in diagnosing different diseases. Data mining and machine learning algorithms gain its strength due to capability of managing large amount of data from several different sources and integrating the background information in the study. Machine learning algorithms are used and evaluated on PIDD dataset to find prediction of diabetes in a patient.

II. LITERATURE SURVEY

1) *KNN Algorithm:* KNN is a simple and also a lazy learning algorithm. It is one of the classification algorithm used in health care. It can be used for both classification and regression. It is more widely used in classification problems. The algorithm is preferred mostly for its ease of interpretation. KNN is distance weighted and majority voting algorithm.

2) *Naïve Bayes Classifier:* It is a classification technique with a notion which defines all features are independent and unrelated to each other. It defines the status of a specific feature in a class does not affect the status of another feature. Since it is based on conditional probability it is considered as powerful algorithm employed for classification purpose. It works well for data with problems an missing values. Naïve bayes is a machine learning classifier which employs Bayes Theorem.

3) *Decision Tree Classifier:* It is a supervised machine learning algorithm used to solve classification problems. It can predict target class using decision rules taken from prior data. It uses nodes and internodes for prediction and classification. Root nodes classify instances with different features. Root nodes can have two or more branches while the leaf nodes represent classification.

III. IMPLEMENTATION

Steps To Compute Process In Prediction Of Diabetes Mellitus

1) *Preprocessing:* As the first step the target data must be collected before applying data mining concepts. The datasets are pre-processed to analyze the class labels. Data cleaning removes noisy data and replaces missing data from target dataset.

2) *Training Phase:* The classification algorithm is now applied to cleaned dataset. The algorithm now classifies correctly classified and incorrectly classified instances. The classifier accuracy is tested for different values of parameter k.

3) *Testing Phase:* The distance between target data which is unknown and each instance of diabetes dataset which is known is found using Euclidean distance measures. The computed distances are sorted and closest of target class are considered as per the parameter k. The majority of these class labels are assigned to target variable. This predicts whether the person has diabetes or not.

Analysis on Medicine and Doctor Availability in Government Hospitals

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Abstract: Government hospitals provides medicines for the treatment to the patients based on the diagnosis. Generally government hospitals stores all the patients historical data and current data in cloud .In our system user can register with there details, which is stored to the admin's database. This system allows the user to view the hospital location using predictive algorithm and details about the hospital such as doctors, medicines ,specialists availability and also helps the patient to get details about the government hospitals. Financial and administrative performance are improved by high utilization of resources and reduced fraud and abuses and optimized by supply chain and human capital management

Keywords: Predictive analysis, government hospital, data analytic

I. INTRODUCTION

Government hospitals provide medicines for the treatment to the patients based on the diagnosis. During the peak time of a disease, some medicines are not available in the hospital. Based on patient's historical and current data, system can generate a report on what all medicines should be available in the hospital and in what quantity at particular time and location of the hospital. Doctors and specialists availability needs to be managed as per the inflow of patients. Many times patients do not find the required doctor during the peak of a disease or shortage of doctors in a hospital. Based on patient inflow for a particular ailment or disease, historical data and current data, system could generate the requirement of number of doctors required in a hospital on daily basis and also during a peak of a disease. Many times, doctors are not available when patients needs them more, e.g. on weekends, holidays, evenings etc.

II. LITERATURE REVIEW

A. Big Data Analysis Inferential And Predictive Methods

Big data analysis efforts identify drivers related to loss and momentum and to inform. Government hospital voluntarily contributes de-identified records to create a single federated database. Identify common variable likely to influence retention and progression and measure the degree of influences. It is crucial to find way of systematic approach to manage integrate analyse interpret such large complex data sets.

III. PROBLEM STATEMENT

Development of a Healthcare Information system to provide analysis on Medicines availability in Government hospitals and analysis on increasing the efficiency of the hospital by managing availability of doctors and specialists. Analytics to bring in efficiency in Operational functioning by Medicine, number of doctors and specialists availability in Government hospitals.

IV. METHODLOGY USED

A. HTML

HYPERTEXT MARKUP LANGUAGE is the standard mark-up language use for creating web page. HTML written from HTML ELEMENT consisting of tag in angle bracket. HTML consists of opening and closing tags. In HTML all tags are pre-defined tags.HTML element from building block all the website.HTML allow the image and object to be embedded and can used to create interactive forms.

B. Cascading Style Sheet (CSS)

It is the style sheet language used for describing look and formatting of documents written in the mark up language.css can be acts as interface written in HTML and XHTML languages. CSS is designed to enable the separation of presentation and content, including layout, colours and fonts.css files reduce the complexity and repetition in structural content.

Corpus Based Dual Sentiment Analysis

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Abstract:
Sentiment analysis is an important current research area. The importance of sentiment analysis coincides with the growth of social media such as reviews, blogs, and social networks. Sentiment analysis is also called as opinion mining. We propose a system called Dual Sentiment Analysis which is better in performance when compared to Bag-Of-Words (BOW). It is used to analyse and compare the public opinion for the product review. The Dual Sentiment Analysis framework works with polarity classification i.e, positive, negative, neutral (3 classes classification). In this analysis, we use Dual prediction Classification. Dual Prediction classifies test review by considering two sides of a review. To avoid the dependency on external sources, we develop corpus-based method to build a pseudo-antonym dictionary to reverse the review. At the end, result shows the effectiveness of Dual Sentiment Analysis in sentiment classification.

Keywords: Bag-Of-Words, Dual prediction classification, Opinion Mining, Sentiment analysis.

I. INTRODUCTION

To understand what others think, which is been an important part in decision making process. In the past, when an information was needed for decision making, we take a survey for others opinion. Now a days, due to the growth of social media the source for the decision making has been transformed to online, web logs, twitter, social networks, product rating sites, chat rooms etc where the people express their views on almost anything in online. Sentiment Analysis is used for gathering opinions of the public. Sentiment Analysis enables us to know the thought of each and every person. It enables positive and negative evaluations. This book is interesting [Positive] and This book is boring [Negative]. It is a special text mining task. Initially Bag of Words model is used in order to find the sentiment of comments. This is a statistical machine learning. But, the performance of bag of words is limited due to some fundamental deficiencies n handling polarity shift problem. Though it is very simple and efficient, it is not recommendable because it discards some semantic information. Major disadvantage is polarity shift problem. Polarity shift is a type of linguistics circumstances which reverse the polarity of the text. i.e, the sentiment of the text will be reversed from positive to negative and vice versa. For example, positive text," I like Sweets" will be reversed from positive to negative when the negation word, "don't" added to the positive text. This is the major drawback of Bag-Of-Words model under the polarity.

II. RELATED WORKS

[1] Dual Sentiment Analysis: Considering two sides of one Review, Rui Xia, Feng: This was processed to handle the polarity shift problem. They have proposed the Dual Sentiment Analysis model. They used Dual Training and Dual Prediction Algorithm. They developed Corpus-based method to build a Pseudo-Antonym dictionary for review reversion.

[2] Sentiment Classification using Machine Learning Techniques. This focused on topical categorization, attempting to sort documents according to their subject matter (e.g., sports vs. politics). This model used supervised learning approach such as naïve Bayes, and support vector machines to sort entire reviews into negative or positive sentiments. In this, sentiment analysis seems to require more understanding than the usual topic-based classification. They concluded results generated by standard machine learning methods are rover to result by human-generated baselines. Yet machine learning method performs well on only traditional topic-based categorization and lack in functionality on sentiment classification.

[3] This system proposes a rule-based multivariate text feature selection method called Feature Relation Network (FRN) that considers semantic information and leverages the syntactic relationships between n-gram features. They used Feature Relation Network (FRN) that has decision tree models, recursive feature elimination, and genetic algorithms. FRN empowers the consideration of heterogeneous n-gram features for improved opinion classification, by joining syntactic data about n-gram relations. FRN selects the features in a more computationally effective way than numerous multivariate and hybrid methods. But Noise and redundancy in the feature space increase the likelihood of over fitting.

[4] Sentiment Analysis of Blogs by Combining Lexical Knowledge with Text Classification. In this paper, they present a unified framework in which one can use background lexical information in terms of word-class associations, and refine this information for specific domains using any available training examples. knowledge-based approaches and learning-based approaches are used. By diverse domains show that this approach performs better than using isolation. The issue of sentiment analysis is further complicated by the fact that bloggers often use jokes and cultural references to illustrate their opinions, making the labeling task unclear for people unfamiliar with the relevant facts or ref

[5] Effects of Adjective Orientation and Gradability on Sentence Subjectivity To compute the subjectivity of a sentence. This system considers two such features semantic orientation, which represents an evaluative characterization of a word's deviation and gradability, which characterizes a word's ability to express a property in varying degrees. supervised classification technique such as semantic orientation, Gradability are used. This technique retains subjective sentences and discards the objective sentences.

SPC
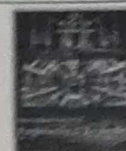
A Quality of Service Load Balanced
Stochastic Diffusion Search – TABU Search (SDSTS) Network
Backbone for MANET

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Abstract

The ad hoc network can present many different problems that influence a solution which can assure a proper quality of Service (QoS). The primary goal offered by the QoS was to ensure information delivery that was better and carried out by this network with a better network resource utilization. The main objective of the QoS routing found in the Mobile Ad hoc Network (MANET) was the optimization of the utilization of network resources when satisfying some application requirements. The AOMDV (the Ad hoc On-demand Multipath Distance Vector) and its routing protocol was a multipath extension of the protocol of AODV which aims at identifying a loop-free along with a link-disjoint multipath at the time of the process of route discovery. A Stochastic Diffusion Search (SDS) will have a strong framework in mathematics that can describe the algorithm and its behaviour by means of investigating resource allocation, linear time complexity, minimal criteria of convergence, global optimum convergence and robustness. The TABU Search (TS) is a search strategy based on memory for guiding the method of local search in order to continue a search beyond the local optimum. For this work, there is a hybrid SDS along with the TS which is proposed for improving the QoS load balancing.

Keywords: Quality of Service (QoS), Mobile Ad hoc Network (MANET), AOMDV (Ad hoc On-demand Multipath Distance Vector), Stochastic Diffusion Search (SDS) and Tabu Search (TS).

1. Introduction

The Mobile Ad hoc Network (MANET) has been a mobile node collection which depends on either a fixed infrastructure of communication or any other base station for providing connectivity [1]. Every node found in the MANET will act as either a host or a router or both. In case two of the nodes have not been within the range of transmission of one another, all other nodes will be required for serving as their intermediate routers to communicate between two different nodes. The hosts are however free to be able to move around in a random fashion and this way, the topology of the network can change drastically with time. thus, routing protocols for the MANET need to be adaptive and should be able to maintain routes since the traits of the connectivity of network can change.

The designing of an efficient along with a reliable protocol for routing of these networks can be a very challenging issue [2]. For the same reason, there are several protocols in routing that are developed and this attempt at accomplishing the task in an efficient manner.

A routing based on the QoS is quite challenging in the MANETs since the nodes need to keep some up-to-date information on link status. Further, owing to the MANET and its dynamic nature, the maintenance of a precise information on the link state may be challenging. The resource which is reserved is not guaranteed as the mobility has caused a path breakage or a depletion of the power of mobile hosts. A QoS routing will first find a feasible route

that is new for recovering this service. It is an agreement that provides some guaranteed services like bandwidth, packet delivery rate, delay jitter, delay and so on. The supporting of several QoS constraints can make the problem of routing NP-complete [3].

As the ad hoc networks tend to change their topology often, a new and improved system performance by means of a load balancing or a reduced end-to-end delay is achieved. This brings done route discovery and the routing overheads. An Ad hoc On-demand Multipath Distance Vector (AOMDV) based routing protocol will extend the AODV for building and also for storing various paths within the routing table. This may not always result in any new flood of the packets of route requests. As opposed to this, a source node may also choose the route available subsequently.

The existing protocols in multipath routing may not be used for route stability for carrying on multipath routing. There are several other modified versions of the AOMDV protocol for providing solutions to different problems in routing. Such protocols may resolve issues such as the problem of route cut-off, route stability and node energy efficiency.

Earlier, there were several algorithms that included the exact and the approximate algorithms proposed for addressing problems in optimization. There are certain meta-heuristic algorithms of search using framework that was population-based that have the capacity to be able to handle some high dimensional problems in optimization. The Artificial Bee Colony (ABC) and the Stochastic Diffusion Search (SDS) are some examples of this and they have an improved scheme with a good performance in a varied range of

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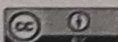
Ingenious Automated Street Lamp Network using PLC

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Abstract: As we all know that energy consumption has increased a lot and sources of energy are limited, it has become mandatory to conserve power. Energy crisis is one of the critical issues. The street lighting is one of the largest energy expenses for the city, accounting for upwards of 35-45% of a municipality's utility budget. An intelligent lighting control system can reduce municipal street lighting costs as much as 70%. The main aim of the proposed system is the intelligent gleam control of street lights using PIR sensor to optimize the problem of power consumption. Street lights are being replaced by LED's and controlled by Programmable Logic controller (Siemens S7-200 PLC). The main difference from other controllers is that PLC's are toughened for severe conditions and have the feature for extensive input/output (I/O) arrangements. This system can save a large amount of electricity compared to the existing one.

Keywords: FBD, LED, PIR sensor, Siemens S7-200 PLC, Power consumption

1. Introduction

The street lighting might prevent vehicle accidents and injuries. However unwanted usage of street lights leads to large power consumption. It's a well-known fact that our country suffers from lack of energy for electricity. The main purpose of the street lights is to provide the lights during the nights in roads, highways streets etc. But due to the continuous functioning of the street lights there is a huge loss of electricity. If a street light consumes 1000 W (approximately) of electricity in an hour and it runs for 2 hours extra every day, the 1000 X 2 = 2000 Wh = 2 KWh. For a road of 2 km length (at 2 lights fixed with a single post at 10m centre to centre distance), 400 lights are in place. 2 KWh X 400 = 800 KWh is wasted in all areas every day, so we can imagine the wastage of fossil fuel, water, man, time etc. to produce the electricity which is not benefiting anybody, that's why an initiative has to be taken to save the power wastage due to street lights .Well without the street lights it is difficult for the vehicles to run at night in highway and roads so we can't stop their functioning. The ingenious Street Lights are the one that detects the vehicle from a certain radius and glows till the vehicle crosses a particular radius. By this way we can conserve high amount of electrical energy which are wasted by normal street lights. The proposed system uses LEDs instead of incandescent lamps. The system is multipurpose, extendable and totally variable to user needs.

Around 30% of the revenue of a nation is required in the lighting of streets and avenues. The maintenance cost is too high and if the light is wasted like they are generally glowing in the night when there is no vehicle nearby or even in the morning when there is no need of light, it will eventually affect the economy of our country. On an average the street lights are working for more than 13 hours a day which is more than the actual required amount of time. So by using smart lights we can not only save electricity and reduce the working time of the lights but we can improve our economy.

2. Proposed system

The aim of ingenious street lights is to save energy and to save cost. Each smart street light can be installed one by one to the network of smart street light systems by setting the parameters. The system is autonomous-distributed controlled. The proposed system mainly operates based on three modes:
Ample mode:
Criteria: Sunlight intensity > 250 lux
Action: OFF state
Timing: 6am – 6pm
Night mode:
Criteria: Sunlight intensity < 250 lux
Action: ON status
Timing: 6pm -10pm
Late night mode:

Our system mainly focuses on late night mode where necessity of street light is less. The system is designed in such a way that the lamp glows only when a pedestrian or a vehicle movement is sensed by the sensor. The entry and exit light of the ingenious network is always in ON state for safety purpose. Based on the information received from sensor consecutive three lights glow and the process repeats as the movement is detected based on the commands from the logic controller.

3. Block diagram

The circuit consists of PIR sensor for which a power supply of 5v is given. The sensor detects vehicle and pedestrian movement. It is covered with Fresnel lenses that create a wide angle of detection. The operating voltage range is 3.6v-5v. Sensitivity range is 5 to 12m.Once the sensor detects a

Grid Connected PV System with MPPT Controller using ANFIS Algorithm

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Abstract:

This paper proposes the presents analysis of a grid-connected PV system with Maximum Power Point Tracking (MPPT) control. ANFIS algorithm based MPPT Technique is used for tracking maximum power point. The single-ended primary-inductor converter (SEPIC) is a type of DC/DC converter that allows the electrical potential (voltage) at its output to be greater than, less than, or equal to that at its input. The output of the SEPIC is controlled by the duty cycle of the control transistor. ANFIS is used to provide a constant output, the output is not dependent on input. Even if any variation occurred in input the SEPIC converter is step up the input and maintains the output constanly. Simulations are performed to test the controller's capability of tracking the MPP when sudden variations in weather conditions occur. Experimental measurements are going to be in hardware system and its validated with the simulation.

Keywords: Components; Renewable, MPPT, SEPIC, Grid, ANFIS

I. INTRODUCTION

Micro-inverter topologies for photovoltaic (PV) power generation are classified into three major groups: the single-stage, the two-stage, and the multi-stage types. The multistage micro-inverters are usually comprised of a step-up dc-dc converter front stage, under maximum power point tracking (MPPT) control, an intermediate high-frequency dc- dc converter stage, used to attain a rectified-sine waveform, and a low frequency unfolding stage to interconnect to the grid. However, the multi-stage power train and the associated high component count result in a costly product. The two-stage micro-inverter can be designed cascading a MPPT-controlled step-up dc-dc converter and a grid-tied high-frequency inverter, whereas the single-stage topology has to perform the voltage step-up, the MPP tracking, and the dc-ac inversion functions all in one stage.

II. OBJECTIVE

To design and Implement Inverter for Photovoltaic applications

- Achieve high voltage boosting.
- Without bulky transformer.
- With less number of switches.
- With reduced switching stress.
- With reduced filter size.

CONVENTIONAL METHODS

TRANSFORMERLESS PV SYSTEMS

The efficiency of the whole PV system can be increased with an extra 1%-2% in case the transformer is omitted. Transformer less inverters have higher efficiency and smaller weight and size than their counterparts with galvanic separation.

III. ISSUE IN TRANSFORMERLESS PV INVERTERS

The ground leakage current is very high. In case the transformer is omitted, the generated common-mode behavior of the inverter topology greatly influences the ground leakage current through the parasitic capacitance of the PV. In order to minimize the ground leakage current through the parasitic capacitance of the PV array, several techniques have been used.
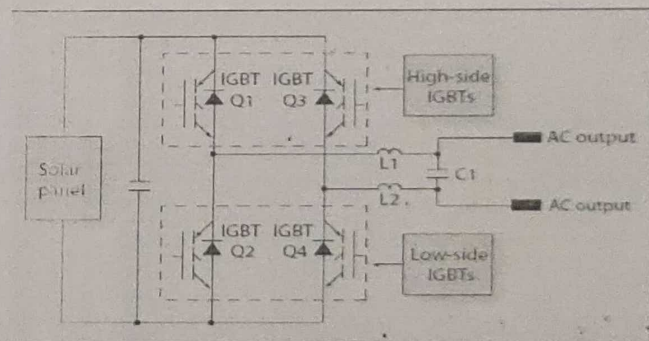
TOPOLOGIES

There are two main topology groups used in the case of grid-connected PV systems, namely,

- WITH GALVANIC ISOLATION
- WITHOUT GALVANIC ISOLATION

GALVANIC ISOLATION

Galvanic isolation can be on the dc side in the form of a high frequency dc-dc transformer or on the grid side in the form of a big bulky ac transformer. Both of these solutions offer the safety and advantage of galvanic isolation, but the efficiency of the whole system is decreased due to power losses in these extra components.

Autonomous Adjustable Pesticide Spraying Device for Agricultural Application

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Abstract - This paper presents the development of a smart sensor based environment monitoring system, in remote villages especially for crop fields. Basically, it is difficult to monitor the environment, weather all the time, so we proposed this project in Crop field, to monitor the weather and any environment changes using IOT which having some sensors like Temperature sensor, Moisture sensor, humidity which measures respective parameters throughout the day. And also parameters measured by sensors are sent through IOT. Using measured parameters we can detect and prevent from diseases by spraying pesticides.

Key Words: IoT, Monitoring, Spraying, Image processing, Controlling.

1. INTRODUCTION

Beginning with the quote "SAVE THE AGRICULTURE", main factor of agriculture is to predict the climatic changes, here we are using IOT for monitoring the weather as well as atmospheric changes throughout the crop field by having several systems in different fields as clients, which is getting reported every time to the server, about the current atmospheric change at that every certain place. So the watering and pesticides can be served based on the conditions of the field. Camera that captured image is processed then identified the disease affected plants and then pesticides to be sprayed.

In this system we are using Raspberry Pi to control the operation of the system. We use small tank in that we add pesticide and place motor to spray. Whenever the sensors detect the diseased plant, the signal is given to Raspberry Pi and it will turn on the motor and start to spray. By making some modification we can use for other applications also.

1.1 FEATURES

1. It can moves in forward direction.
2. It can moves in reverse direction.
3. It can suddenly turn right or left side direction.
4. It can even move sprayer up or down.

1.2 TECHNICAL SPECIFICATION

1. It operates on 9Vdc.
2. Low power consumption of 25 milli ampere current.

3. Operating Voltage of Raspberry Pi module 3Vor 5Vdc.
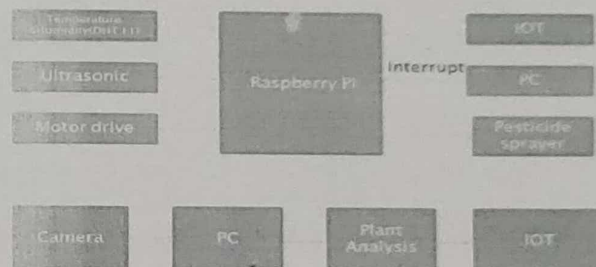4. Operating frequency of Raspberry Pi module 400 MHz

1.3 HARDWARE

1. Robot module.
2. Monitoring system.

1.4 SOFTWARE

1. Python Program

2. BLOCK DIAGRAM DESCRIPTION

The block diagram of proposed system is shown below.

Fig 2.1 Block diagram

This block diagram consist of Camera, Temperature & Humidity (DHT 11) sensor, Ultrasonic sensor, Sprayer, Motor drive (L293D) and Raspberry Pi Kit the description of each block is given in following subsections.

CAMERA:

A Webcam is a video camera that feeds or streams its image in real time to or through a computer to a computer network. When "captured" by the cam, the video stream may be saved, viewed or sent on to other network travelling through systems such as the internet, and wifi as an attachment. When send to remote location, the video stream may be saved, viewed or on sent there. Unlike an IP camera (which connects using Ethernet or wifi), a webcam is generally connected by a USB cable, or similar cable, or built into computer hardware, such as laptops.

MICROCONTROLLER BASED CHLORINE LEVEL MONITORING AND CONTROL SYTEM FOR ELECTRO CHLORINATION PLANT

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Abstract: In thermal Power station sea water is used as coolant agent in condenser for steam to water condensation process. The salty sea water needs to be chlorinating to avoid growth of blue mussels & green algae inside condenser parts and sea water carrying pipe line. The Electro chlorination system produce sodium hypochlorite in electrolysis process of the incoming salty cooling water. This sodium Hypochlorite dosage creates unfavorable condition for mussel larvae growth in incoming salty sea water that occurs in summer & autumn seasons preventing them settling in the sea water cooling line & condenser parts. The equipments in electro chlorination process consists of feed water pump which takes sea water from cooling water system, booster pump, electrolyser, degassing, storage tank and dosing pumps. As per environmental standards the chlorine dosing level should not exceed above 1.0 ppm. In our project we have proposed "microcontroller based chlorine level monitoring and control system for Electro Chloniation Plant "the optimum level of chlorine generation which prevent over dosing of chlorine in sea and lowering the auxiliary consumption.

Keyword: Sodium hypochlorite, Sea water, Electro chlorination, 1.0 ppm, Storage tank.

I INTRODUCTION

The processes involved in electro chlorination is simple. The main idea involved in electrolysis of water is to produce a chlorinated solution. This is done by adding saltwater into electrolyzer cells. The first step involved is removing the solid waste from the saltwater. Next,the saltwater is streamed through a channel of decreasing thickness. The channel is made up of a cathode and an anode. As the water flows through channel, a low voltage DC current's applied. When the DC current is applied, the electrolysis starts and sodium hypochlorite is instantly produced with hydrogen gas (H_2). The hydrogen rich sodium hypochlorite then sent to a tank that removes the hydrogen gas. The dehydrogenization mechanism varies from device to device but the process is generally the same. After the removal of hydrogen from the solution, it is stored in a tank.

Industries need large quantities of cooling and/or process water and are generally located near water bodies such as sea shores. One of the disadvantage in utilizing seawater directly is the presence of microbiological organisms such as algae and bacteria. High concentration of these organisms can cause the fouling of piping systems at the inlet to the conduit.The formation of this slime causes a reduction in the heat-transfer capacity of the equipment. This is more in the industrial plants that consume large quantities of water. It is the duty of plant engineers and operators to ensure that the cooling water circuits are monitored and maintained by reducing bio-fouling which affects the heat- transfer surfaces.

II COMPONENTS USED

The following components are used in this project,

A. PIC MICROCONTROLLER

The 16F877A is a microcontroller that does many tasks because it has a large programming memory,8k words and 368 Bytes of RAM. The 40 pins makes it easier to use the peripherals as the functions are spread out over the pins. This makes it easier as any number of external devices can be attached without worrying as there are enough pins to complete the action. The main advantage is that each pin is shared between two or three functions so it is easier to decide what work the pin functions.

B. 16×2 LCD

LCD stands for liquid crystal display. All the LCD'S performs the same functions (display characters numbers special characters ASCII characters etc).The program is same for all and they all have same 14 pins (0-13) or 16 pins (0 to 15). Alphanumeric displays are used in several applications such as computers, word processors, photocopiers, medical instruments, mobile phones, etc. The 16 x 2 alphanumeric dot matrix display can display 224 different characters and symbols.

PV Data Acquisition with Web based MPPT Controller using Labview

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Abstract: The solar power demand is increasing due to its advantage and depletion of the non-renewable energy resource. In this case, energy produced from solar power should not be wasted due to various losses and to obtain a maximum output voltage, Perturb and observe MPPT algorithm is used. For these purposes, Monitoring of the solar power is essential and this done by the help of LabVIEW software and hardware in this paper. The LabVIEW software provides a GUI (Graphical User Interface) which is more user-friendly to the user. It contains programming feature in IOT (Internet of Things) which helps us to monitor the data through computer, phone by internet connection. The IBM Watson IOT platform is used as a platform to monitor the data from client side.

Keywords: Single axis solar tracker, LabVIEW, IOT foundation, NI myDAQ, Perturb and observe method

I. INTRODUCTION

In industry level, remote monitoring of data is attaining more popularity. It reduces the work force of the company and the time taken for operation in a company. For this purpose, LabVIEW is very suitable software. It was created for programming easliy to the machine to work in automation field. It contains many features, we are using IOT feature for remote monitoring the maximum output voltage obtained by perturb and observe MPPT algorithm. In recent technology Power generation stations are monitored and controlled by automation .By these advantage, we can store the data of operation and from that data we can analyze to provide a solution for a problem .The solar panel should be continuously connected to the hardware which is interfaced with LabVIEW software. The hardware used in this project is NI myDAQ, which is a student kit. By accessing to IBM WATSON IOT platform and entering the correct MAC(Media Access Control) address of the hardware interfaced system.

II. LITERATURE SURVEY

[1] The power generated by photovoltaic panels is monitored by using labVIEW web publishing tool and NI data dashboard. The data viewable only in internet explorer and it only viewable in computer with LabVIEW software and data dashboard is for very limited range.[2] The Power generated by pv panel and consumed by load is monitored through web browser programmed in LabVIEW. It has good user interface but it also needs remote computer with labview software run time engine module for monitoring [3] The modified perturb and observe mppt algorithm is implemented by LabVIEW.[4] 2D tacking system for solar panel is designed to track solar energy effectively by labview vision and motion module[5]The behaviour of characteristics of solar panel is studied in offline and real time simulation mode in LabVIEW [6] The perturb and observe mppt algorithm and boost converter in LabVIEW ,the remote monitoring is not implemented.[7] the remote accessible of solar energy programs by LabVIEW web services and remote panel is designed in this paper, It again need a system with the LabVIEW software for monitoring purpose.[8] the remote monitoring is done by the internet of thing in LabVIEW program, this makes monitoring without the need of system with labVIEW software, In this mppt tacking and converter is not used.[9] It help to know about the configuring of the NI myDAQ and how to use it.[10] It helps to know about the IBM WATSON IOT platform for monitoring purposes and how to use it.

III. PROPOSED SYSTEM

In this system , the solar irradiance is ensured to fall on the photovoltaic panel continuously. This made possible by using the single axis horizontal solar tracker by the input of light dependent resistor. This operates by automatic manner, there is no need of controlling part. The output of the photovoltaic panel is given to the NI myDAQ hardware which acquires data and send to the LabVIEW software. This hardware is low cost device among national instrument DAQ. In the software ,Perturb and Observe mppt algorithm and boost converter operation was programmed. This algorithm is simple to implement and effective in performance. The maximum output voltage from the algorithm simulation is uploaded to internet of things by the LabVIEW program. By this way , there is no need of the special equipment to connect to internet. The remote monitoring of the process is possible from smart phones, tablets, laptop.

Bidirectional Full Bridge Configuration for Inductive Wireless Power Transfer

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Abstract: The wireless power transfer (WPT) offers a band new way for energy acquisition in electric-driven devices. An active resonance circuit is used to wirelessly transfer power from the transmitter to the receiver. In traditional circuits parallel L-C resonant tank in transmitter circuit is commonly used, where as our project utilizes series-parallel CLC tank circuit. Capacitive WPT is used for low power applications whereas the wireless inductive power transfer (IPT) is used for both low and medium power applications. Various WPT applications are electric vehicles, electronic gadgets, lighting, material handling and biomedical implants. Day by day new technologies are making our life simpler. Wireless charging through resonance could be one of the next technologies that bring the future nearer. In this project it has been shown that it is possible to charge low power devices wirelessly via inductive coupling. It minimizes the complexity that arises for the use of conventional wire system. In addition, the project also opens up new possibilities of wireless systems in our other daily life uses.
Keywords: Wireless power transfer, Transmitter, Receiver, Bidirectional power transfer

I. INTRODUCTION

We live in a world of technological advancement. New technologies emerge each and every day to make our life simpler. The conventional wire system creates a mess when it comes to charging several devices simultaneously. It also takes up a lot of electric sockets and not to mention the fact that each device has its own design for the charging port. The solution to all these dilemma lies with inductive coupling, a simple and effective way of transferring power wirelessly.

Wireless Power Transmission (WPT) is the efficient transmission of electric power from one point to another trough vacuum or an atmosphere without the use of wire or any other substance. This can be used for applications where either an instantaneous amount or a continuous delivery of energy is needed, but where conventional wires are unaffordable, inconvenient, expensive, hazardous, unwanted or impossible. The power can be transmitted using Inductive coupling for short range, Resonant Induction for mid-range and Electromagnetic wave power transfer for high range. WPT is a technology that can transport power to locations, which are otherwise not possible or impractical to reach.

A. Components
Timer 555
Op amp741
Coil copper 22awg
Full wave rectifier

B. Methods

Technology	Energy Transfer	Enabling the Power Transfer
Inductive coupling	Magnetic fields	Coils of wire
Resonant inductive coupling	Magnetic fields	Resonant circuits
Capacitive coupling	Electric fields	Conductive coupling plates
Magnetodynamic coupling	Magnetic fields	Rotating permanent magnets
Microwave radiation	Microwaves	Phased arrays/dishes
Optical radiation	Light/infrared/ultraviolet	Lasers/photocells

Dual Output Isolated Converter for E-Vehicle

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Abstract: In this project a unique integrated and isolated dual-output dc–dc resonant converter is created , which can interface both HV traction batteries and LV loads. The proposed topology is bidirectional, capable of delivering power from HV traction batteries to the LV load . This is achieved by increase the power density of the converter, the dual-output dc–dc resonant converter combines magnetic components of resonant networks into a single three-winding electromagnetically integrated transformer. This project improves economics and environmental incentives, as well as advances in technology, are reshaping the traditional view of industrial systems. Currently existing system, Batteries cannot be charged from grid and in down times no back up facilities. In comparison to two stand-alone dc-dc converters and other integrated converters, the proposed integrated topology has less number of components, smaller size, wide input/output voltage range, and potentially lower cost. The overall efficiency is enhanced by utilizing variable dc-link strategy.
Keywords: Dual output converter, Isolated converter, Bidirectional converter, E-vehicle converter

I. INTRODUCTION

Conventional Internal Combustion (IC) engine vehicles use petroleum products (i.e. petrol, diesel, or LPG) as the source of energy for driving purpose. The shortage of fossil fuel is the most critical issue over worldwide and the immediate solution is to minimize the use of fossil fuel as much as possible. Moreover, conventional IC engine vehicles emit carbon dioxide and various greenhouse gasses by making it harder to satisfy environmental regulations. The solution leads to adopting alternate fuel vehicles such as Electric Vehicles (EV) and Hybrid Electric Vehicle (HEV). EV does not emit tailpipe pollutant like particulates, ozone, volatile organic compounds, carbon monoxide, hydrocarbons, lead and oxides of nitrogen which plays a vital role in air pollution and greenhouse gas Moreover the fossil fuel issue can be minimized.

A. Components
PIC16F877A
Crystal Oscillator (10 MHz)
Rectifier-W10
IR211O; IRF840; Regulator (7805)
Diode IN4001
Resistor-100E, 1k, 470k ; Inductor-2mH; Capacitor- 470uf, 100uf, 22pf
Power supply (12v)

B. Existing System
Prior efforts to develop integrated EV onboard chargers include integration of non-isolated single-stage chargers that combine an ac-dc PFC converter and a dc-dc bidirectional converter, which interfaces an HV battery pack and the propulsion inverter. These topologies require more transistors and diodes, and integrating a high-power dc-dc converter with a low power onboard charger might reduce the charging efficiency. Some PEVs might not be equipped with a bidirectional converter between HV battery pack and propulsion inverter.

C. Proposed System
In this project a highly integrated dual-output isolated topology capable of G2V and HV-to-LV charging has been proposed. This work focuses on design and development of the bidirectional isolated resonant dc-dc stage. A unidirectional LLC resonant converter is used as the isolated stage of onboard charger to regulate the voltage/current of the HV traction battery. Another LLC resonant converter is used to deliver power from HV traction battery pack to LV dc loads. The proposed integrated topology has less number of components, smaller size, wide input/output voltage range, and potentially lower cost. The overall efficiency is enhanced by utilizing variable dc-link strategy. The leakage inductance and magnetizing inductance at both primary side and secondary side of integrated transformer without a need for additional individual resonant inductors.

Design and Development of Security- based Voting System

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Abstract: Voting machines are the total combination of mechanical, electromechanical, or electronic equipment (including software, firmware, and documentation required to program control, and support equipment), to cast and count vote; to report or display election results; and to maintain and produce any audit trail information. More over it is also important that a false entry should not be made so for this one of the most secure methods for voting is using a biometric sensor like a fingerprint reader.
Keywords: Fingerprint sensor, Using GSM Module messaging system, Embedded system.

I. INTRODUCTION

This project examines policy regarding the electronic approaches and developments towards electronic data storage and transmission. Finger print devices for Voting machines and other existing identity documents are discussed and implemented in this project .This is a time consuming process as the person has to check the voter ID card with the list he has, confirm it as an authorized card and then allow the person to poll his vote. Thus, to avoid this kind of problems, we have designed a finger print based voting machine where the person no need to carry his ID which contains his entire details.

II. EXISITING SYSTEM

A. Votes are casted by just pressing a button.
B. It does not have security features.

1) Drawbacks of Existing System
a) Casting false votes are possible.
b) Finding Non-eligible candidates is difficult.

III. PROPOSED SYSTEM

A. Votes are cast using fingerprints.
B. Biometric security feature is implemented and uploaded data to the cloud using GSM module.

1) Advantages of Proposed System
a) No chance of casting false votes.
b) Only the eligible candidates can caste vote.

IV. BLOCK DIAGRAM

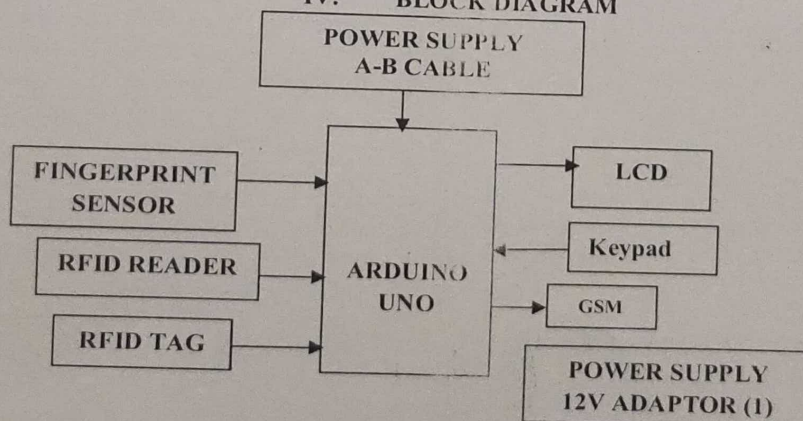Fig1.Block Diagram

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ADAPTIVE LOW-POWER LISTENING PROTOCOLS FOR WIRELESS SENSOR NETWORKS IN NOISY ENVIRONMENTS

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Abstract— Wireless sensor network(WSN) has important application such as remote ecological monitoring and target tracking. This has been enabled by the availability, particularly in recent years, of sensors that are smaller in size and smart. These sensors are equipped with wireless interfaces with which they can communicate with one another to form a network. Wireless sensor network consists of sensor nodes with sensing and communication capabilities are sensor node are generally battery powered devices, the critical aspects to face concern how to reduce the energy consumption of nodes, so that the network lifetime can be improved to reasonable times.

Keywords- Cluster Wireless Sensor Network, LEACH,Packet Delivery Ratio,System PEGASIS, Residual Energy.

I. INTRODUCTION

Wireless sensor network (WSN) refers to a group of spatially dispersed and dedicated sensors for monitoring and recording the physical conditions of the environment and organizing the collected data at a central location. WSNs measure environmental conditions like temperature, sound, pollution levels, humidity, wind, and so on. The more modern networks are bi-directional, also enabling control of sensor activity. The development of wireless sensor networks was motivated by military applications such as battlefield surveillance; today such networks are used in many industrial and consumer applications, such as industrial process monitoring and control, machine .

Over the past few years ,duty cycling[1],[2] and low power listening (LPL)[3]-[5]have been greatly explored for energy saving in wireless sensor network (WSNs). According to recent extensive surveys[1],[6],[7].LPL with duty cycling is one of the most popular energy efficient techniques for MAC protocols in constrained WSNs. The technique is used widely in real WSN deployments and in the default MAC protocol of TinyOS[8] and Contiki [9],the two common OS frameworks for constrained WSNs.

A theoretical framework incorporating LPL temporal parameters with the false wakeup rate and the data rate. We then formulate an energy

SMART DRIP IRRIGATION

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Abstract : —Today we are living in an era where automation is playing important role in human life where luxuriousness is simplified and provided for common layman .The proposed smart drip irrigation system is cost effective and useful for the illiterate farmers in remote areas and villages who have large and small agricultural lands .The system uses the hardware component ; which is subjected to various environmental conditions such like temperature , humidity , moisture .The Moisture sensor which finds out the moisture needed for the plant ; The temperature sensor is used for the continuous monitoring of soil humid , when moisture content required is detected to be much lower than the provided threshold value it sends the signal to the relay ;The solenoid valve opens to fetch water to the plants Based on the usage of water the sump or tank automatically fills water from other water resources using wires .The myRIO which is used to acquire data's from the experimental setup and gives the exact readings and calibrated values .This project would also help during drought where there are minimal water resources .This framework is explicit for a product and subsequently its use is constrained. Appropriate booking of water system is basic for proficient water the executives in harvest creation ; especially under states of water shortage.

Index Terms - : My rio, Sensors, Data Acquisition, Solenoid Valve..

I. INTRODUCTION

The water which is the important constituent for all living things on this Earth .In this present era there is a great demand for water for all just like water we need food for survival for humans Food which contains starch is stored in plants. Plants do need water for significant growth. The scarcity of water is some things a major problem in present era .This project deals with supply of water for plants in an sufficient manner using data acquisitions, through sensors as in [1] and my rio enabled with process of acquiring of data which the processor pays the vital role . The myRIO is the heart of the system . the myRIO has special features like portable , highly reliable , good data accuracy facility which gives the major highlighted task achievement as in [2], the achievable requirement of water for the studied and taken as a reference from the paper by , the early stage of design of drip irrigation as in [3] that enhances knowledge to the present theory of design is enabled with the use of advancement of the relay and solenoid valve for the supply of water for the plants in early mornings and evenings as in [4] , the time duration for watering plants is made as half an once during days and one hour once during winter [7].

II.ADVANCEMENT OF THE PRESENT IRRIGTION SYSTEM

The present irrigation system has made an overall review of finding ways to overcome and help the farmers in solving the drawbacks of the existing systems designed globally as in [5].

A. Maintaining the Integrity of the drip irrigation

The proposed system helps to figure out the need of systems with enhanced advancement and automation enabled in it for the lame man , and the pic - microcontroller is been replaced with the my rio which is used in the data acquisition and generation of signals respectively , the commonly used water valves are been replaced with the solenoid valve which induces the mechanical switching of the valve .

The moisture sensor which helps to sense the plants moisture level and gives the acquired data to the plant and the temperature senor send the required data to the my rio from which the myRIO generates the signal to the solenoid valve once when the condition is been satisfied , the my – rio follows the condition such that if the test case of that neither both moisture and temperature sensors is false and either moisture sensor is true or temperature sensor is false vice-versa the myRIO condition is not satisfied of generating signal to the relay and solenoid valve , only when both the conditions are true then only the myRIO satisfy the condition of the test case and hence allows the generation of the signal as in [6] .

3

Area Efficient Fixed-Point LMS Adaptive Filter

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Abstract : Some high performance systems like digital signal processors (DSP), microprocessors, FIR filters etc. uses barrel shifters, multipliers, multiplexers, delay elements as key components. Performance of the multiplier determines the system's performance. Multipliers are very slow and also consume most of the area in the system. Hence, optimization of speed and area are major constrains in the design of multiplier. Least Mean Squared (LMS) algorithm benefits as low convolution and coherence of implementation. One main concern in all experimental situations is to develop stemmer that provide faster convergence of the adaptive filter by the instant better filtering performance. A better architecture for the implementation of a DLMS adaptive filter to achieve low adaptation-delay and efficient area, we propose the use of a novel partial product generator and a scheme for optimized balanced pipelining across the time-consuming combinational blocks. This have less area-delay product (ADP) and less energy-delay product (EDP) than the best of the existing systolic structures, on average, for $N = 8, 16, 32$ and 64. We propose an efficient fixed-point implementation scheme of the proposed architecture, and thereby replacing shift adder tree by carry select adder.

Index Terms - Adaptive filters, fixed-point arithmetic, least mean square (LMS) algorithm.

I. INTRODUCTION

The digital signal processing implementations has abundant use of adaptive digital filter. A filter is a device that removes unnecessary signal. Filtering is a type of signal processing that drops noise and error signal [2]. There are different types of filters used in different ways. In that least mean square (LMS) adaptive filter is used to improve the power performance [1],[4]. Adaptive filter is a connection between two signals for real time applications. The structure of an adaptive filter defines how the output signal is calculated from input signal. LMS algorithm is used to reduce a desired filter by detecting the coefficients of the filter that produce the least mean square of the error signal i.e. difference between desired output and original output [2]. The fundamental idea of the LMS filter is to optimize the filter weight by upgrading the filter weights .Two bit multiplication and adder tree is used for pipelined computation to reduce the area, and critical path [5]. The previous effort of an delayed LMS adaptive filter is not examined with the fixed point implementation [3],[4]. Formely they made use of FIR filter and weight update blocks as an alternative of error computation block. When collated with FIR filter, LMS adaptive filter is more efficient and also reduces the area and number of delays.

II. EXISTING SYSTEM

The existing work on the DLMS adaptive filter have left discussing about the fixed-point implementation issues such as position of radix point, option of word length, and quantization at several stages of computation, even though they directly affect the convergence performance, predominantly due to the recursive behavior of the LMS algorithm [9]. Each of the algorithm has both advantage and disadvantage with respect to their implementation. So, there is a continual requirement and effort across the signal processing community for improving the current algorithms in terms of improving both performance and reducing the computational complexity.

A. Digital Filter-

A Digital Filter is a structure that performs mathematical tasks. Usually it consists of an analog-to-digital converter to sample the input signal, followed by a microprocessor and some peripheral devices such as memory to store data and filter coefficients and the digital-to-analog converter used to complete the output stage [4]. Program Instructions on the microprocessor implement the digital filter by performing the important mathematical operations on the numbers received from the Analog to Digital converter (ADC) [3]. In numerous high performance applications, an FPGA or ASIC is used instead of a general purpose microprocessor, or a DSP with specific paralleled architecture for filtering.

B. Adaptive Filter-

Adaptive filter is a computational device used for mathematical operations, that iteratively shows the relationship between the input/output signals of the adaptive filter [9]. An adaptive filter manually adjusts the filter coefficients according to an adaptive algorithm. The following Fig 1 shows the diagram of a typical adaptive filter.

Realization of Aging Aware Multiplier using Verilog HDL

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Abstract : Most of the digital devices use multipliers for their operation especially in digital signal applications. It helps to achieve a high data throughput in digital devices. Comparing to addition, multiplication process consumes a greater deal of time, consuming more amount of power and area and thus reduces the speed of the processor. Aging of transistors has a considerable effect on the performance of the multiplier. The effect of aging can be reduced by the use of over-design approaches, but it leads to inefficiency in area and power. Furthermore, the use of fixed latency design may lead to timing violations. To overcome this predicament, we use low power variable latency multiplier with Adaptive Hold Logic (AHL). Negative bias and positive bias temperature instability, both degrade the transistor speed, and the system may fail owing to timing violations. Hence, it becomes more important to design highly reliable multipliers with reduced area, delay and power consumption. The proposed architecture will be designed as a razor based Vedic multiplier design with novel adaptive hold logic (AHL) circuit which as high efficiency than the existing column bypass multiplier. The experimental results show that our proposed architecture with 32 x 32 aging aware multipliers is more efficient and has lesser latency.

Index Terms - Aging Aware, Adaptive hold logic, Latency, Bypassing, Reliable.

I. INTRODUCTION

Digital Multipliers form the basic functional unit of any processors and is widely used arithmetic unit for variety of applications such as discrete cosine transform, Fourier transform and for digital filtering purposes. The simplest among all multipliers is the Array multiplier and it is also the slowest among all multipliers [1]. There are also other high speed multipliers which includes Booth multiplier, Wallace tree multiplier, etc. [2]. The process of multiplication involves a considerable amount of time as it includes a number of steps in the computation process. The throughput of multipliers can be improved by reducing these steps so as to achieve a speed in multiplication process [3]. In order to maximize the speed of multiplication, we use Vedic algorithm [4] in our multiplication process which is a faster way of oral multiplication.

Among the various Vedic multiplication techniques, the Urdhava Tiryakbhyam sutra is considered to be more efficient in terms of speed [5]. Bypassing in multipliers is a methodology to reduce the number of unwanted computations to be performed when the multiplicand (or multiplier) bit is zero. This reduces the power and the delay caused but to these computations.

II. LITERATURE SURVEY

Multipliers are designed to be more reliable by adopting many ways. In [6], variable latency pipelined multiplier using booth algorithm is proposed. This paper proposes an implementation as a self-timed multiplier core or as a multicycle multiplier core. The proposed architecture combines a split carry save array pipelined organization with 2nd order Booth algorithm and the design is proposed for 32 bit synchronous implementation. A 64-bit carry select adder is proposed in [7] using variable latency (VL) adder technique which required a lower supply voltage than consumed by a conventional adder. The effect of negative bias temperature instability and circuit delay can be overcomed by the modification of the VL adder design. An aging aware multiplier was proposed in [8] where Array multiplier is used along with column/row bypassing to achieve a greater throughput. Also the temperature bias instability is analyzed and the design is able to resist these instabilities.

A low power multiplier design using row and column bypassing was proposed in [9] which showed that column bypassing and 2-D bypass multipliers were more efficient than row bypassing multipliers. The multiplier is designed using simplified adders and half adders instead of full adders. In [10], a Braun multiplier which is a parallel array multiplier is designed using bypassing techniques both 1-Dimensional and 2-Dimensional bypassing. This paper shows a comparative study on the basis of area, power and delay of different bypassing multipliers for various bits using Spartan – 3E FPGA. In [11], it reveals the Vedic algorithm, which is a faster way of oral calculation and for multiplication and product finding through the end results of normal multiplication. Also it portrays the current usage of Vedic algorithms and its importance in the design of computer processors to improve its speed and performance.

III. PROPOSED AGING AWARE MULTIPLIER

To overcome the effect of aging in multipliers, an aging aware multiplier using Adaptive Hold Logic (AHL) is proposed. Fig. 1 shows the architecture of the proposed aging aware multiplier which consists of an n-bit multiplicand and an n-bit multiplier as inputs, 2n-bit output, AHL circuit, column/row bypassing multiplier and 2n 1-bit Razor flip-flop.

INFANT TRACKING SYSTEM USING IMAGE PROCESSING TECHNIQUES

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Abstract: In the contemporary state the parents were facing lot many difficulties to safeguard their infants. In these situations, mother's find hard to leave their child alone. In order to control the circumstance our project is helpful for the infants who are in danger. This project is already done using GPS and GSM to track the infants and also it is used in the RF field but it is a failure project due to the high radiations infants gets affected severely. To switch over this problem video analytics is accessed in this project. This will be processed to predict the moment and every activity of the infants and also it gives live updates of the child to the respective infant parent in time of illness or during the general situations. It is used for monitor the infants and also the young adult to overcome the fear of parents it will be a great help to parents as they can work in a more relaxed environment by giving a fruitful output. Also, emergency situations can be quickly noticed and handled efficiently.

INTRODUCTION

Digital image processing includes the information of images, sampling. Quantization etc. The main objective is to extract useful information from the image by image representation, enhancement and analysis of the image processing techniques. The basic concept of digital image processing is the use of computer algorithms to perform image processing on digital images. Digital Image processing (DIP) is currently a hot research area in medicine and it is believed that they will receive extensive application to biomedical system in the next years. Digital Image Processing can be processed by matrix laboratory (MATLAB).

EXISTING SYSTEM

The design of an Advanced Baby Monitoring System using Raspberry Pi. This system monitors parameters such as temperature and humidity surrounding the infant, movements made by the infant and also would automatically log the activity and sleep cycles of the latter and act as a means by which parents could monitor their child remotely. For this it uses a camera in order for parents to view their child and it also sends a real time video to the webpage by which it provides reminders to the caretaker or rather parent. This system architecture consists of sensors for monitoring vital parameters such as temperature and humidity sensor, PIR sensor and sound sensor which would incorporate a microphone. Measurements of these parameters can be done and conveyed to the parents with an alarm triggering the system to initiate proper action

SMART VACUUM CLEANER USING LabVIEW

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ABSTRACT

Vacuum cleaner is kind of dirt removal system. It is a machine which will automatically clean. Several robotic vacuum cleaners are available on the market but only few are available which cleans the wet floors. The purpose of this project is to design and implement a vacuum cleaner controlled via laptop application. Smart Vacuum Cleaner is designed for cleaning process which is easier than usage of manual vacuum cleaner. The dual H bridge is used to drive the motors. MyRio is the microcontroller used in this system. It gives the input to H bridge. Relay module is used to control the suction process. 12V DC battery gives the power supply to MyRio, H bridge, suction motor and and pulse width module. MyRio gives the pulse width modulation input to rover which finds the duty cycle of rover. Rover is used to move the vacuum cleaner. Rover consist of two motors both are used to move forward and reverse direction. one wheel to turn right and another wheel to turn left. Free wheels is used to move the front side of the vacuum cleaner. Ultra sonic sensor is used to indicate the density of dust level.Suction motor is used to suck the dust. Suction motor consists of filter in the middle of dust collector box which does not allow the dust to other side of the box. Smart vacuum cleaner is controlled by MyRio that is configured through Wi-Fi.

I.INTRODUCTION

Nowadays, vacuum cleaners have taken major attention in research due to their effectiveness in assisting humans in floor cleaning applications Basically, vacuum cleaners are distinguished on their cleaning expertise like floor mopping, dry vacuum cleaning etc. Some vacuum cleaners use infrared sensors for simple obstacle avoidance while some utilize laser mapping technique. Each cleaning and operating process of vacuum cleaners has its own advantages and disadvantages. Vacuum cleaners utilizing laser mapping are relatively faster, less time consuming and energy efficient but it is costly.Vacuum cleaners using obstacle avoidance based robots are relatively time consuming and less energy efficient but less costly. Importing them from abroad increases their costs. The main objective of this work is to provide a substantial solution to the problem of manufacturing vacuum cleaner utilizing local resources while keeping it low costs.

A **vacuum cleaner** is also represented as a **sweeper** or **hoover**, is a device that uses an air pump (a centrifugal fan in all but some of the very oldest models), to suck up dust and dirt from floors and from other surfaces such as upholstery and draperies.

The dirt is collected in a dustbag or a cyclone for later disposal. Vacuum cleaners, which are used in both homes and industry, are available in a variety of sizes and models.It is also available as a small battery-powered hand-held devices, wheeled canister models for home use. Vacuum cleaner can handle several hundred litres of dust before being emptied, and it has self-propelled vacuum trucks for recovery of large spills or removal of contaminated soil. Smart Vacuum Cleaners can be used to suck up both dust and liquids.

In this work, "Smart Vacuum Cleaner " has been designed for all environments. The vacuum cleaner is fully autonomous and making decisions on the basis of the outputs of ultrasonic sensors and after being processed by myRIO micro controller and control the rovers (2 DC motors) by the Dual H-bridge driving circuitry. In manual mode, the vacuum cleaner can also be used to clean a specific area of a room by controlling it manually from laptop with a WiFi configuration. via myRIO connectivity.

II. LITERATURE SURVEY

According to Uman Khalid[1] As the technology is advanced, robots are getting more important for researchers to make life of mankind comfortable. This paper presents the design, development and uses IEEE Standard 1621. Robots operates in autonomous mode as well as in manual mode along with additional

VOICE CONTROLLED MOTOR VEHICLE FOR PHYSICALLY CHALLENGED PEOPLE

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Abstract— The reason for the robotics in business and private expectation has come to be very basic for executing testing work into the more advantageously basic way. There are a lot of researches working on to enhance the connection between humans and robot. The paper exhibits the exploration of the structuring and improvement of a voice-controlled talking robot utilizing cell phone dependent on Arduino Uno microcontroller. The control arrangement of the robot development will be utilized by the voice and the robot will reaction the directing people by producing hints of the human voice with each verbal guidance. The proposed framework will be planned dependent on the microcontroller which is associated with the keen android telephone through Bluetooth module for accepting a voice order. The voice direction is changed over to content by an application of the Android telephone and sends fundamental information to the microcontroller for controlling robot development. In the wake of accepting the information the robot reactions as indicated by the order by performing legitimate development to the best possible bearing as indicated by the voice direction. An SD card module alongside an SD card which will comprise of some pre-recorded human voice as a sound document will be utilized by the robot for the improvement of the robot's talking framework. In the wake of getting each direction the robot will act as per the guidance and will almost certainly talk diverse sentences.

Keywords— Voice command, Robot , Arduino

1. INTRODUCTION

The surprising raise in the utilizing of robots and automation offers various advantages as well as it has drawn the attention of both academic investigation and commercial programs [1].
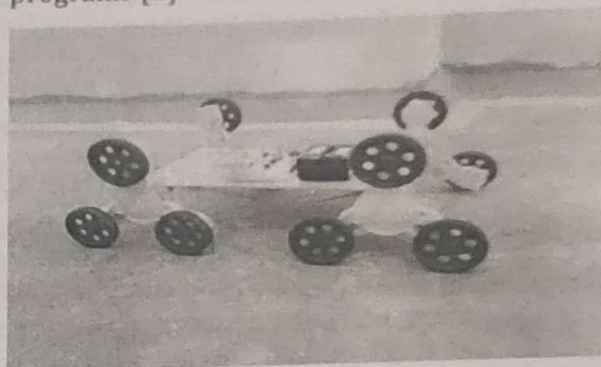
The analysis on numerous technique of controlling robot has accomplished quite a few success by introducing a number of innovative & unique methods of robot movement control. Verbal association planned for robot controlling is very of an imaginative procedure among numerous strategies which are presented with respect to robot control[1].Previous works on voice controlled robots [1]-[3] shows that the design of those robot were complicated and none of them were able to interact with users. Robots are anticipated to socialize along with its user however it has not yet arrived at this kind of level [2], [3]. There are numbers of techniques to control robot using voice identification yet it is reasonably limited [1].

The development of a voice controlled robot is demonstrated in this paper which has the ability to follow voice command from user and does communicate with user by using pre-recorded human voice sound. Previously developed robot used ZigBee [10] which is a costly device. Another Voice Controlled Robotic Vehicle utilized computer with a sound card and a

SMART MOBILE SYSTEM FOR PREGNANCY

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ABSTRACT:

The world mortality rate has decreased but many women are still dying every day from pregnancy complications. Various technic resources are being used in an integrated manner in order to minimize even more the death of both mothers and babies. Pregnant women from rural areas can't do their regular check-ups at the early stage of pregnancy. But routine check-up can avoid birth of physically challenged infant in this system. Some vital parameters of pregnant women like pressure, temperature, heartbeat rate are monitored and measured. This project provides a wearable device which will continuously monitor the vital parameters to be monitored for a patient and do data logging continuously. If any critical situation arises for a patient, this unit rise and alarm and communicates to the web app using WIFI which is in-built in CC3200.It will collect and transfer the information to the doctor at the earliest because of IoT and the product is compact and wearable. Also in this proposed system IoT has been implemented and its related technology plays a dynamic role in pregnant women.

INTRODUCTION:

Information and communication technologies are transforming our social interactions, lifestyles, and work-places. One of the most promising applications of information technology is healthcare and its wellness management. Healthcare is moving from a reactive approach to a proactive approach characterized by early detection, prevention, and long-term management of health conditions. The current trend places a contribution on the monitoring of health conditions and the management of wellness as significant persons to individual health-care and wellbeing. This is particularly important in developed countries with a significant aging population, where information technology can significantly

Online Grievance Management System at Institute level

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Abstract - Wireless spoofing attacks are easy to launch, it plays a significant role in the performance of wireless sensor networks. Though the identity of a node can be verified through cryptographic authentication, conventional security approaches are not always desirable because of their overhead requirements. The challenging tasks in Wireless Sensor Network are identification of spoofing attackers, determination of number of attackers, localization of multiple adversaries and eliminating them. The enhanced clustering approach is used to detect the spoofing attackers and localize them. This approach fails to predict the attackers accurately. To overcome this problem, Enhanced Intrusion Detection System (EIDS) to detect the spoofing attackers. The cluster head act as IDS to monitor the behavior of nodes in their cluster such as packet transmission which helps to identify the misbehaving nodes in wireless sensor network.

Index Terms –EIDS, Spoofing attackers, Routing algorithm.

INTRODUCTION

Wireless sensor network is a network of simple sensing devices which are capable of sensing some changes of incidents/parameters and communicating with other devices, over a specific geographic area for some specific purposes like target tracking, surveillance, environmental monitoring etc. Wireless networks are usually deployed in an unattended manner and are controlled remotely by the network operator. The unattended nature of wireless networks can be exploited by attackers. Specifically, an attacker can capture and compromise wireless nodes and launch a variety of attacks by leveraging compromised nodes. Spoofing is a situation in which one person or program successfully masquerades as another by falsifying data and thereby gaining an illegitimate advantage. In a large-scale network, multiple adversaries may masquerade as the same identity and collaborate to launch malicious attacks such as Network Resource Utilization attack and Denial-of-Service attack quickly. Among various types of attacks, spoofing attacks are easy to launch that degrades the network performance highly. Spoofing is when an attacker pretends to be someone else in order to gain access to restricted resources or steal information. Therefore, it is important to

    i) Detect the presence of spoofing attacks,

    ii) Determine the number of attackers, and

    iii) Localize multiple adversaries and eliminate them.

WORKING ENVIRONMENT

HARDWARE REQUIREMENTS

Here we do not specifically require any hardware as it is being simulation kind of paper. But using system with 512MB of RAM and at least of 40GB of Hard disk makes smoother operation.

SOFTWARE REQUIREMENTS

Network Simulator version is used for fast simulation in Linux OS and N map Files are also installed for output display. If the User uses Windows Os then VM Ware helps to install Dual Os with virtual memory allocation for temporary use.

PROBLEM DEFINITION

Problem Definition and Description

Intrusion detection is a set of actions that determine and report unauthorized activities in wireless sensor network. It detects the violation of confidentiality, integrity and availability. In case of wireless sensor network, the communication among the sensors is done using wireless transceivers. The threats that damage the security in WSN can be detected by the Enhanced Intrusion Detection and prevention systems (EIDPS). IDPS had an ability to identify the network intrusions and misuse by gathering and analyzing data. The wireless EIDPS can monitor and analyze user and system activities, recognize patterns of known attacks, identify abnormal network activity, and detect policy violations in WSN. Thus, it is desirable to monitor the attacks and report the same to a source node to avoid losing an important event. The group of nodes forms a cluster and a cluster head act as an Enhanced Intrusion Detection and Prevention System (EIDPS). The Control Authenticator (CA) distributes the public key and private (secrete) key to each node in the cluster. The EIDPS monitor the activities of all the nodes in the cluster. The source node S starts to send the packets to their destination node D. Based on the public key the EIDPS monitor each and every activity of the nodes in the cluster such as transmission power and energy level. At the time of packet sending, the sender node check the receivers secrete key of the

HUMAN EMOTION DETECTION USING ELECTROENCEPHALOGRAPHY SIGNALS

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ABSTRACT: *The main objective of our paper is to detect the emotions with high accuracy. Emotion is a feeling arising from one's circumstances, mood, or relationships with others. This is mainly designed for the children with autism. Autism is a serious developmental disorder that harms the ability to communicate and interact. Here we use only three EEG electrodes to acquire the brain signals. In experimental results, it is observed that the output has high efficiency and low noise compared to the existing systems because the brain waves have high intensity and gives better results for clustering of EEG data stream. Our results show that we can successfully classify the three emotions.*

1. INTRODUCTION

Emotion recognition in humans is an important research area in the following domains: software engineering, education and medicine. Recognizing emotions from the brain signal has gained an increased attention recently due to its intensity, because emotion recognition can help people to develop many application on human-machine interaction such as brain computer interface. Electroencephalogram (EEG) is a test that detects electrical activity in our brain using small, metal discs (electrodes) attached to our scalp. We aim to investigate several EEG-based features extracted from brain signals acquired to determine the significant features. These identified features can be used to classify the emotional states thereby aiding the diagnosis and treatment of patients affected by neurodegenerative diseases, having impaired face emotion recognition (e.g. Autism Spectrum Disorder).

2. LITERATURE SURVEY

Hayfa Blaiech proposed in his paper [1], an emotional recognition system based on physiological signals. They adopt the seven basic emotions that are: neutral, joy, sadness, fear, anger, disgust and surprise, and they choose the fuzzy logic techniques to classify the EEG signals and to analyze the results. Very less work has been approved using all the aspects such as of speech, emotion and EEG. Thus Priyanka Abhang [2] attempts to review the combine efforts of EEG brain signal and Speech to recognize the emotions in humans. EEG signals are taken using the Kernel Density Estimation (KDE) and classified via the artificial neural network classifier to find the emotional state of the human. The Prashant Lahane [3] method gives better estimation of emotion of the human from streaming EEG data by using the concept of cluster kernels. For detecting the emotions, there are several techniques and inputs that can be used. A brief description about all of the techniques along with comparison of all of them has been presented by Gayathri.P [4]. Valentina Bono have proposed a system to determine several EEG based features for classifying three emotional states (happy, fearful and neutral) using two classifiers LDA and SVM [5].
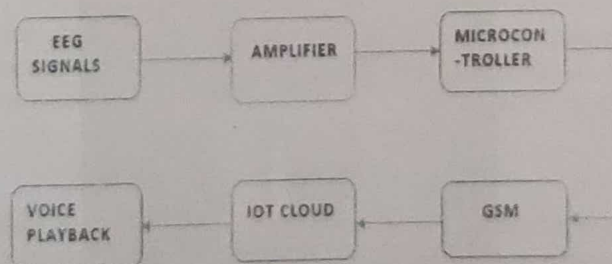
3. METHODOLOGY

Fig 1 Block diagram of proposed system

In this work we have used only three EEG electrodes to acquire the brain signals and the acquired signals are amplified using dual opamp LM358N. The amplified data's are send to pic microcontroller PIC16LF1526,

SUDDEN CARDIAC ARREST PREDEICTION AND DIAGNOSIS USING ECG SIGNALS

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ABSTRACT: *Cardiacarrest occurs suddenly and often without warning. It occurs when our heart suddenly stops pumping blood round your body, commonly because of a problem with electrical signals in your heart. A person dies within minutes if he is not treated immediately. The existing system detects the cardiac arrest and only sends information to the doctors and family members but they cannot give immediate help to the patient if they are far away. It detects cardiac arrest only when it occurs but the patients die within few minutes from the time of their cardiac arrest. This is a major drawback in this system. To overcome this drawback we have used Successive approximation algorithm where the patient's heart rate is automaticallyupdated in IOT cloud, which can be viewed and accessed by doctor from any location, if the patient's heart rate exceeds the threshold value the defibrillator automatically gets ON and electric shock is given to the patient as an immediate remedy.*

Key Words: Sudden Cardiac Arrest, IOT Cloud, defibrillator.

INTRODUCTION

rdiacarrest occurs suddenly and often without warning. It is caused due to electrical failure in e heart which results in that causes an uneven heartbeat. Sudden cardiac arrest happens without caution d requires immediate emergency treatment. A person candie from sudden Cardiac Arrest in minutes if it not treated right away. Doctors rarely analyze cardiac arrest with medical tests as its happening. Instead, diac arrest frequently is diagnosed after it occurs. ECG (Electrocardiogram) records the electrical ivities generated by the heart muscles. Doctors usually use an ECG to help diagnose heart block. It shows w rapid the heart is beating and its regularity. ECG electrodes are used to acquire the heart rate of the ients and displayed in a waveform.

LITERATURE SURVEY

ranulHaque [1] discussed in his paper about an automatic ECG signal processing system for ecting cardiac disorders as part of telemedicine application. This system is used toacquire ECG nal, process it and extracts important parameters like PQRST to detect heart normalities.HimanshuGothwal [2] discussed in his paper about the method to analyze ctrocardiogram (ECG) signal, extract the features, for the classification of heart beats according to erent arrhythmias. Fast Fourier transforms are used to classify the peaks in the ECG signal and then ural Networks are applied to identify the diseases.

enberg Marquardt Back-Propagation algorithm is used to train the network. NikhilGawande [3] presents hethod to classify various heart diseases using convolution neural network algorithm which gives iation in P wave, QRS complex and T wave parameter in ECG are used to identify the type of illness of han heart.Sugondo Ha diyoso [4] has used PAN Tompkins algorithm for detection of Arrhythmia disease ig ECG signals to know the heart condition of athletes and patients using mobile android ile.AnupmaMarwaha [5] presents a method for analysis of ECG signals and arrhythmia detection using tal filter algorithm and Neural network approach.It uses smooth filter with an odd span to remove all base line drifts.

METHODOLOGY

paper includes ECG sensor that measures the heart pulse and transfers the signal to (PIC16LF1526) ocontroller which has a in built Analog to digital convertor that converts the signals into digital signal sends to 16X2 LCD module which displays the ECG values and also sends to GSM module (SIM 800C) h transfers the data to the IOT cloudwhich stores each second data of the patient which can be viewed e doctor from anywhere. A defibrillator is connected through a serial port to the PIC microcontroller

SMART GOGGLES WAIST BELT FOR VISUALLY IMPAIRED

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ABSTRACT:

The existing system includes the Infra-red sensor in the blind stick which indicates the presence of obstacles and voice message alert system. This system involves limited and fixed routes to follow daily routine. This project encompass ultrasonic sensor with voice message system and GSM module for message based alert system. In this paper we propose a navigation system or device which is helpful for blind persons. They can detect obstacle in front of them, they can also travel in known as well as unknown location with the help of that blind stick. The GSM module system guides the person by suggesting the possible routes, mode of transport and journey time to reach the destination safety. The convenience of the project admits auto detection of obstacles and sends alert message using GSM module.

INTRODUCTION:

Commuting in crowded environment is a challenge for visually impaired people. Visually impaired people are at disadvantage because they do not have access to any contextual and spatial information around them. According to a survey, as of 2010 there were more that 285 million visually impaired people worldwide, out of which 39 million were blind. We have proposed to develop a cost effective application systems for visually impaired people so that they can move freely in known or unknown environment. In today's fast paced world, the daily lives of people has been affected by the aid and support offered by technology. People, who are differently abled, now have the option of many devices, which can help them in their day-to-day activities. A lot of devices have been created in this field however, most of

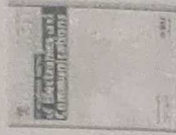AEU - International Journal of Electronics and
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Regular paper

A hyperchaotic memristor system with exponential and discontinuous memductance function

Karthikeyan Rajagopal [a] , Sundaram Arun [b] , Anitha Karthikeyan [a] , Prakash Duraisamy [a] , Ashokkumar Srinivasan [b]

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Abstract

Most of the memristor chaotic and hyperchaotic oscillators discussed in the literatures use the cubic flux controlled memristor model. The drawback of this model is that in spite of knowing the terminal voltage polarity, one cannot easily determine whether the memductance increase or decrease. Hence we propose new memristor hyperchaotic oscillators derived using exponential memductance and discontinuous memductance functions. Dynamical analysis of the proposed

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Speech Enhancement via Smart Larynx of Variable Frequency for Laryngectomee Patient for Tamil Language Syllables Using RADWT Algorithm

P. Malathi ✉ G. R. Suresh, M. Moorthi & N. R. Shanker

87 Accesses

Abstract

The Laryngectomee patient has damage in vocal cord and leads to loss of speech; therefore, patient uses electrolarynx (EL) device during speech for speech clarity. The EL device consists of a vibrator placed over the vocal surface during speech, and the speech signal modulates with the vibrator signal for clarity in speech. However, vibration from the EL device produces a constant signal and produces less speech clarity during various environmental conditions such as indoor, outdoor and populated area. In this paper, the above problem is alleviated by generating automated vibration signal with manual tuning for speech clarity in different environmental conditions. The proposed Smart Larynx (SL) device replaces the electrolarynx (EL) which consists of a Smart Phone and Vibrator App with frequency ranging from 250 to 450 Hz. From the experimental result, the speech attains about 85% clarity of normal speech after processing with Radial Dilation Wavelet Transform algorithm. The SL device validates the clarity of the speech based on monosyllable, bisyllable and trisyllable in Tamil Language.

Cache Memory Compression and Decompression Technique to Improve System Memory Performance

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Abstract—Speed is the challenging issue for any electronic component. Memory access time is dependent on speed of the microprocessor. Access time is more in the off-chip memory than on-chip memory. In order to increase the speed, cache memory compression technique is found by microprocessor system designers, as it increases the cache capacity and off-chip bandwidth. Performance of the processor, power consumption and area were assumed in previous work on cache compression. A lossless cache compression algorithm is proposed and designed for high performance processor. This technique allows Parallel compression of multiple words using dictionary mode. Compression ratio is not degraded in the performance. The simulation output results of proposed cache compression algorithm are compared with IBM's Memory Expansion Technology (MXT), X-Match dictionary based algorithm, LZ algorithm and FPC algorithm. MXT is a memory compression/decompression technique which improves performance by increasing the usable size of off-chip main memory, X-Match is a dictionary based algorithm which uses move to front coding strategy, Lempel-Ziv (LZ) algorithm and finally proposed algorithm is compared with Frequent Pattern Compression (FPC) which compresses cache lines at the L2 level. The proposed and implemented algorithm yields better performance, area and power consumption costs compared with other existing algorithms.

Key Terms: Cache Memory Compression, Data compression, Parallel compression of multiple words.

I. INTRODUCTION

Semiconductor technology rapidly develops and micro architectural developments continue to increase which results in performance gap between processors and memory. Moore's law states that for every two years processor technology doubles in performance and speed. Modern processors use L1 and L2 as two levels in cache memories to reduce latency and bandwidth. [3]Cache memory compression has been proposed to improve system performance, since effective capacity can be increased by compressing data stored in on-chip caches which reduces cache misses. When the processor technology increases, speed increases faster because on-chip cache memory hierarchies can store more data in megabyte size. Off-chip memory speed is considerably low compared to processor speed. When the multiprocessor is utilized by system design, it requires more access to memory. Cache compression is used to reduce off-chip communication speed with the processor [5].

A Non Volatile Memory write scheme is proposed in [23] Dynamic Frequent Pattern Compression (DFPC) by using extended dynamic patterns. To compress more data, the frequent patterns are extracted from zero character distribution and with both static and dynamic patterns. This scheme divides 64 byte cache memory into 16 32 bit words for the compression with common patterns. The word content is frequently checked to find if matching is done with high frequency. Appropriate matching algorithms can be selected for the compression with extended patterns.

Compressed caching is the technique introduced into virtual memory hierarchy [24]. In this technique, RAM is used as storage medium for both an uncompressed cache of pages and compressed cache of pages. The effective RAM size is increased so that page faults are decreased. This technique focuses on improving system performance, if it's not possible, no overhead or minimal overhead is introduced when compressed caching is enabled in the system. Based on the outputs obtained through experiments, not only input and output rates are improved but also the overall system behavior can be improved. File system pages and anonymous pages are compressed using dictionary based compression algorithm. The fragmentation can be reduced to zero with this approach.

[25] Compressed last level cache improves system memory performance, it increases the hit rate due to cache expansion.

RF Controlled War Field Spy Robot Using Night Vision Wireless Camera

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ABSTRACT: The intension of this paper is to reduce human victims in terrorist attack. The unique feature of this surveillance robot is that it can travel both on land and water. In this paper we are using the raspberry pi to control the entire robotic module and we are using the ultrasonic sensor to sense the obstacles in the path. Survelliance area critical features include the ability to follow a search instruction plan, rigorous terrain mobility, and the capacity to classify and map underwater mines and other potential threats, communication, obstacleavoidance, and sensor payloads remain critical issues to be resolved for successful operation. Robot have been widely used to perform variety of tasks which reduce the manual work specifically in remote areas where human accessibility is unimaginable. The main applications where the robots have exhibited their excellence include surveillances, tracking targets for objective behind developing is robot is for the surveillance of human activities in the war field or border regions in order to reduce infiltrations om the enemy side.

I. INTRODUCTION

today's world the robotics field is growing exponentially and some of the popular robotic products are used largely the industries, defence, academic and research communities. At present the surveillance of international border areas a difficult task. The border guarding forces are patrolling the border seriously, but it is possible to watch the border at ch and every moment. An essential requirement of this situation is a robot which automatically detects trespasser in e border and report nearby board security control unit. Robot play vital role in helping humans, someof robots will place the human in their work and some robots will act as assistive devices. Likewise in our paper the robot will act a assistive device for soldier's in the field of surveillance. At the time of war where it can be used to collect formation from the enemy terrain and monitor that information at a far secure area. Making a surveillance of any saster affected area for making disaster management like searching and rescuing victims, where humans cannot go aces like submarine, mine and dicks.since robot are getting more sophisticated, reliable and miniaturized where man cannot find out easily. In our paper we are using remote monitoring capabilities can also be enhanced by using e wireless network to control the surveillance robot. The surveillance system using spy robot can be customized for rious fields like industries, banks and shopping malls.The main technology used here for serial communication with r robot is the Zigbee technology. Zigbee technology can be used to share data between two devices considering the ge between two devices. The Zigbee module will be connected with the robot and the commands to the robot will be