Department of Electrical And Electronics Engineering

Technical Magazine

JUL - DEC 2022

EDITORIAL BOARD

INSTITUTION

Vision of the Institute:

To be a premier center of learning in Engineering and Management education that evolves the youth into dynamic professionals with a social commitment

Mission of the Institute:

M1: To provide quality teaching- learning practices in engineering and management education by imparting core instruction and state-of-the-art infrastructure.

M2: To engage the faculty and students in acquiring competency in emerging technologies and research activities through Industry Institute Interaction.

M3: To foster social commitment in learners by incorporating leadership skills and ethical values through value-based education

DEPARTMENT

Vision of the Department:

"To be recognized for producing meritorious electrical engineers with research proficiency and social commitment".

Mission of the Department:

M1: Impart quality education with practice-based learning in producing electrical engineers with ethical values.

M2: Encourage the faculty and students to acquire mastery in cutting edge technologies.

M3: Implement research activities with social commitment.

Program Educational Objectives (PEOs)

PEO-I : Acquire a profound knowledge for a successful career in electrical engineering and allied fields

PEO-II :Pursue higher education and involve in research activities of electrical and electronics engineering.

PEO-III : Exhibit intellectual skills ethically and pursue life-long learning with social commitment.

EEE PBRVITS | **DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING**

Program Outcomes (POs)

1. Engineering knowledge: Apply the knowledge of mathematics, science, engineering fundamentals, and an engineering specialization to the solution of complex engineering problems.

2. Problem analysis: Identify, formulate, review research literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences, and engineering sciences.

3. Design/development of solutions: Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal, and environmental considerations.

4. Conduct investigations of complex problems: Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data, and synthesis of the information to provide valid conclusions.

5. Modern tool usage: Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

6. The engineer and society: Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

7. Environment and sustainability: Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

8. Ethics: Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

9. Individual and team work: Function effectively as an individual, and as a member or leader in diverse teams, and in multidisciplinary settings.

10. Communication: Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

11. Project management and finance: Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

12. Life-long learning: Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

Program Specific Outcomes (PSOs)

PSO-1 : Analyze industrial electrical challenges by applying knowledge of fundamental electrical circuits, electronics and drives

PSO-2 : Apply standard practices in electrical power and control systems with safety and societal considerations.

DEPARTMENT PROFILE

The Department of Electrical and Electronics Engineering was established in 1998 with the approval of the All India Council for Technical Education (AICTE). The Department of Electrical and Electronics Engineering (EEE) is one of the oldest department in the institution, spanning 25 years of existence, and offers the undergraduate program B.Tech-EEE (and one post-graduate program, Power Electronics). The department has qualified and experienced faculty and excellent infrastructural facilities. It is well equipped with laboratories, audio-visual facilities, and software tools such as Multisim, MATLAB, and Pspice.

We also take up the social responsibility of inculcating awareness about energy conservation by promoting programmes about the same. Collaboration with industries for timely amendments of curriculum and laboratories is another credential of the department. The long-term goal of the department is to develop a centre for research and development activities in the thrust areas of solar and wind energy. The main objective of the department is to provide a better solution for industrial problems and to carry out academic and sponsored research projects.

The department is committed to providing students with exposure to state-of the art technologies by signing a Memorandum of Understanding (MoU) with reputed companies. The students exhibit their co-curricular and extra-curricular skills through the activities of the EEE student association and other student exhibition platforms. The Department of Electrical Engineering is committed to excelling in Electrical and Electronics Engineering through education and research with well-qualified and experienced faculty and technical staff members.

PROFESSOR DESK

Welcome to the Department of Electrical and Electronics Engineering, PBR VITS, Kavali, Andhra Pradesh. As a well-known fact, we cannot imagine the world without electricity. The Department of Electrical and Electronics Engineering is a center of preeminence where we nurture young talents by imparting technical training to them so that they can take up the challenges of real world. The Department of Electrical and Electronics Engineering was established in the year 1998 with an objective to develop professionals through quality education with an intake of 60 students.

The B.Tech and M.Tech programs are designed to achieve a balance between depth of knowledge acquired through specialization and breadth of knowledge gained through exploration. The courses offered by the department provide a comprehensive foundation in the core topics of EEE coupled with an area of specialization relevant to emerging engineering challenges.

The faculty in the department is a rich blend of personnel with industrial and professional experience. The dedicated staff members have sound knowledge in emerging areas like power systems, power electronics, and control engineering, etc. The breadth and depth of the research interests of the academic staff ensures a high standard of lecture courses and provides excellent opportunities for challenging and stimulating final year projects. All faculties supplement their delivery using videos, animations overhead projectors. The faculty keeps up with the latest technologies by publishing in reputed journals and presenting at various national and international conferences.

The department is active in organizing the various workshops and seminars for the growth and development of faculty and students' research knowledge further. Our department students are also highly encouraged to implement their innovative research ideas with the help of the expert faculty members and the available standard lab facilities in the department.

"Education can be a powerful weapon to change the world"

Dr. V. MadhuSudhana Reddy
Professor & HOD, EEE.

PAPER BATTERY

A paper battery is an engineered to use a spacer formed largely of cellulose (the major constituent of paper). It incorporates structures to act as high surface-area electrodes to improve conductivity. In addition to being unusually thin, paper batteries are flexible and environmentally-friendly allowing integration into a wide range of products. Their functioning is similar to conventional chemical batteries with the important difference that they are non-corrosive and do not require extensive housing. The composition of these batteries is what sets them apart from traditional batteries. Paper is abundant and self-sustaining, which makes paper cheap. Disposing of paper is also inexpensive since paper is combustible as well as biodegradable. Using paper gives the battery a great degree of flexibility.

The battery can be bent or wrapped around objects instead of requiring a fixed casing. Also, being a thin, flat sheet, the paper battery can easily fit into tight places, reducing the size and weight of the device it powers. The use of paper increases the electron flow which is well suited for high performance applications. Paper allows for capillary action so fluids in batteries, such as electrolytes, can be moved without the use of an external pump. Using paper in batteries increases the surface area that can be used integrate reagents. In addition to being unusually thin, paper batteries are flexible and environmentally-friendly allowing integration into a wide range of products. Their functioning is similar to conventional chemical batteries with the important difference that they are non-corrosive and do not require extensive housing.

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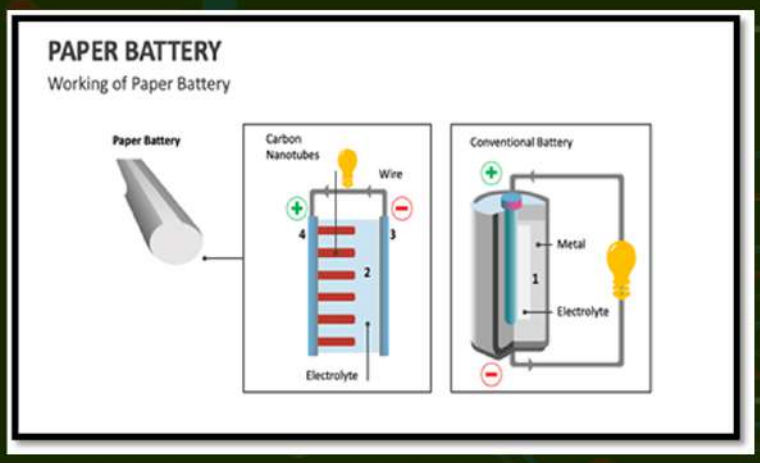
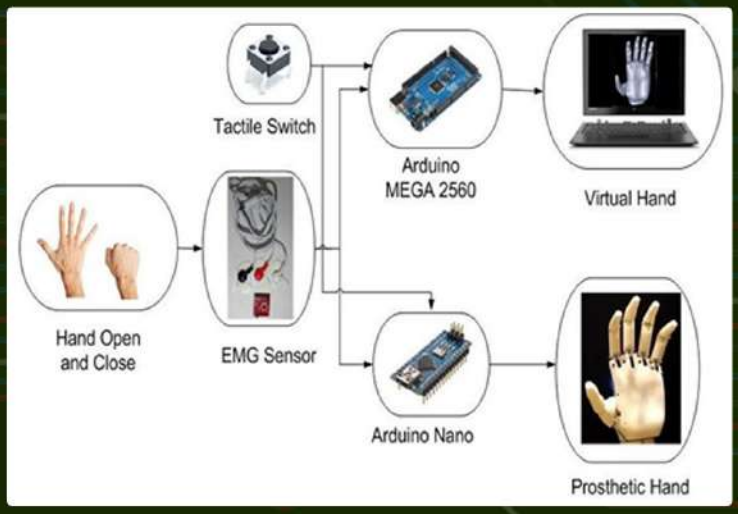


By: KVVSN.RAJKUMAR,
V. SUNOJKUMAR

ARTIFICIAL HAND USING EMBEDDED SYSTEM

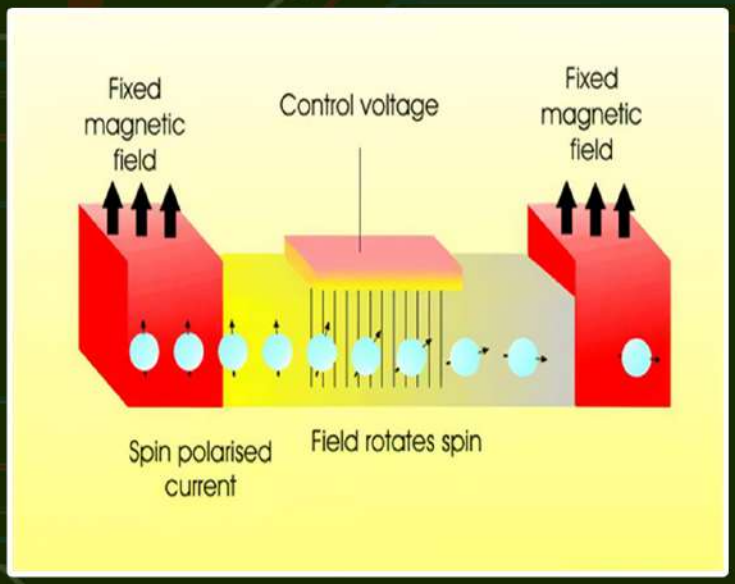
ABSTRACT:
The loss of hand function following an injury, amputation of arm or any serious problem can severely affects a person's quality of life. Artificial hands are the substitute for natural hands in people, but the question is how artificial hands will work effectively. Ideally, any artificial hand should be capable of emulating the natural hand in terms of grasping and gripping objects of varying geometries and physical properties. Despite the technological progress in robotics achieved in the last decades, prosthetic limbs still lack functionality, reliability, and comfort. The most common prosthetic hand is the Claw hook. Thus, to resolve this problem Embedded System is used in artificial hand. The goal is to design and develop a low-cost artificial hand that can be used to provide versatile grasp. Microcontroller and microprocessor play an important role in all types of control applications. Embedded system is a combination of hardware using a Microprocessor and the suitable software along with additional mechanical or other electronic parts designed to perform a specific task. And here this combination is known as Artificial Hand using Embedded System



By: P. PAVANI,
B.V.S.S. GREESHMA

SPINTRONICS

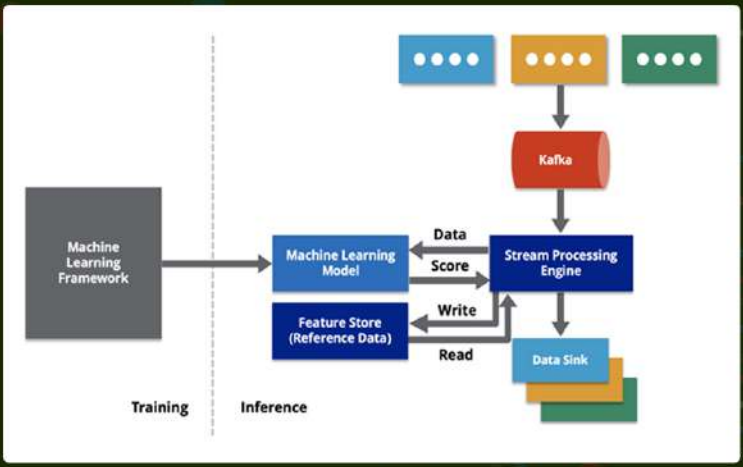
ABSTRACT:
Spintronics also known as magneto electronics is an emerging technology that exploits both the intrinsic spin of the electron and its associated magnetic moment. Spintronics emerged from discoveries in the 1980s concerning spin-dependent electron transport phenomena in solid-state devices. This includes the observation of spin-polarized electron injection from a ferromagnetic metal to a normal metal (1985), and the discovery of giant magneto resistance (1988). The use of spin electrons allows the implementation of novel wave-based computing technologies free from the drawbacks inherent to modern electronics, such as dissipation of energy due to Ohmic losses and also considering the quantum principles. Logic circuits based on wave interference and nonlinear wave interaction can be designed with much smaller footprints compared with conventional electron-based logic circuits. This field of technology helps in creation of Magneto resistive Random-Access Memories, use copper or aluminum for electronic applications instead of silicon



By: M. SohitVenkata Sai,
N. Likhitha Sri

REAL TIME MACHINE LEARNING

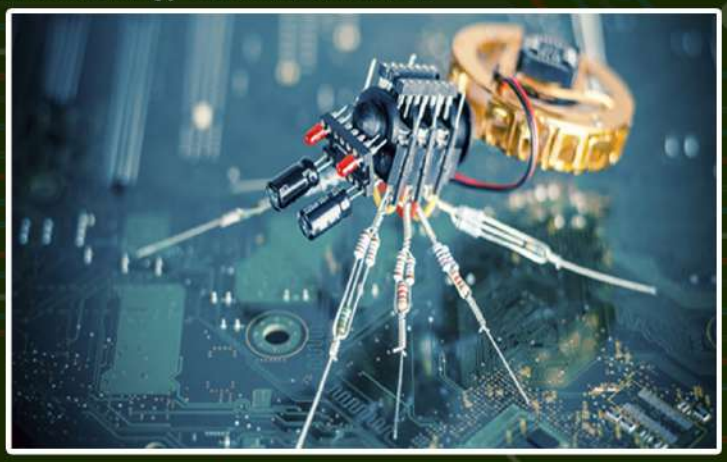
ABSTRACT:
Nowadays, large amount of data is available everywhere. This can be achieved through data mining and machine learning. Machine learning is an integral part of artificial intelligence, which is used to design algorithms based on the data trends and historical relationships between data. In machine learning, a computer first learns to perform a task by studying a training set of examples i.e., machine learning is the art of enabling machines to learn things which are not explicitly programmed. The computer then performs the same task with data it has encountered before. Machine learning is increasingly used in security critical applications, such as video surveillance, face recognition, autonomous driving, virtual personal assistant, social media services, online fraud detection.



By: A. Reshma,
V. Divya,
Y. Niritha

NANOTECHNOLOGY

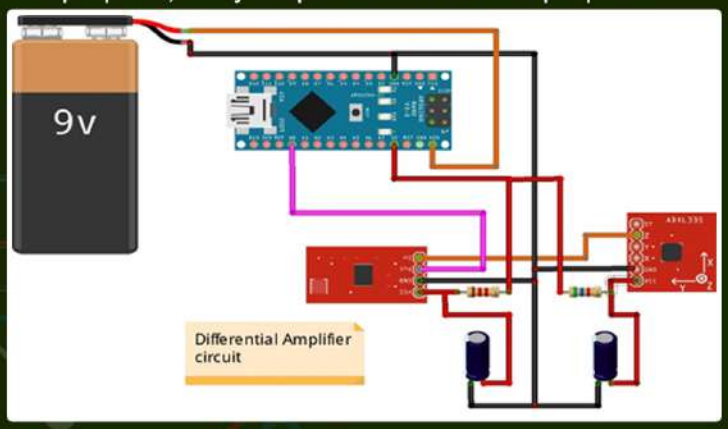
ABSTRACT:
Nanotechnology is the science of the nanoscale: objects around a nanometer in size. Our capacity to construct large, intricate structures with nanometer precision is rapidly changing, and consists of top-down reductive approaches and bottom-up additive approaches. Alternatively, nature has perfected an array of biological machinery that functions at the nanoscale, structures which typically self-assemble driven by the molecular chemistry of subunit interactions. Here we outline recent developments in nano fabrication and biological assembly, and introduce methods of super resolution microscopy by which nanoscale biological systems can be investigated. Nanotechnology is helping to considerably improve, even revolutionize, many technology and industry sectors: information technology, energy, environmental science, medicine, homeland security, food safety, and transportation, among many others. Today's nanotechnology harnesses current progress in chemistry, physics, materials science, and biotechnology to create novel materials that have unique properties because their structures are determined on the nanometer scale. This paper summarizes the various applications of nanotechnology in recent decades.



By: Y. Niritha.
V. Divya.
A. Reshma

EARTHQUAKE DETECTOR USING ADXL335

ABSTRACT:
An earthquake is an unpredictable natural disaster that causes damage to lives and property. It happens suddenly and we cannot stop it but we can be alerted from it. In that situation, earthquake indicator can identify vibration with the assistance of some sensor and can offer time to the individuals to go from the effective region. It can work as a lifesaver to the network. This intended earthquake indicator for home and industry using an Arduino and a highly-sensitive ADXL335 accelerometer can indicate vibrations. This project can be modified and used as a knock-and-shake detector for ATMs, vehicles or door-break alarms. But its main aim is to detect earthquakes and other seismic activities. We know that accelerometers like ADXL335 are highly sensitive to knocks and vibrations in any of the three physical axes. ADXL335 gives analogue voltage equivalent to imposed acceleration. It has three outputs, one each for of X-, Y- and Z-axes. The three analogue outputs are wired to Arduino Uno ADC pins. Any acceleration caused due to movement in any of the axes is detected by the accelerometer and hence by Arduino ADC. If motion is violent enough during an earthquake and crosses a certain threshold, a buzzer sounds as well as a relay energizes. While the buzzer and light are for home purpose, relay output is for industrial purpose



By: A. Reshma,
V. Divya

ARTIFICIAL INTELLIGENCE TECHNIQUES FOR IMAGE PROCESSING APPLICATIONS

ABSTRACT:
In the future, intelligent machines will replace or enhance human capabilities in many areas. Artificial intelligence is the intelligence exhibited by machines or software. Artificial intelligence in the last two decades has greatly improved performance of the manufacturing and service systems. Study in the area of artificial intelligence has given rise to the rapidly growing technology known as expert system. Application areas of Artificial Intelligence is having a huge impact on various fields of life as expert system is widely used these days to solve the complex problems in various areas as science, engineering, business, medicine, weather forecasting.

Machine learning is an integral part of artificial intelligence, which is used to design algorithms based on the data trends and historical relationships between data. Machine learning is used in various fields such as bioinformatics, intrusion detection, Information retrieval, game playing, marketing, malware detection, image de-convolution and so on. Compared to traditional machine learning methods, deep learning has a strong learning ability and can make better use of datasets for feature extraction. So, we use these techniques in image processing which are used in applications of crack detection on walls, security purpose, medical etc.

By: CHIRUTANURU SINDHU
(18731A0207)

BLUE BRAIN TECHNOLOGY

ABSTRACT:
The Blue Brain Project is the first complex project in which a human brain is been portrayed in such a way that it helps us to understand its function and dysfunction through detailed simulations. The main aim is to upload human brain into a machine. So that man can think, take decision without any effort. After the death of the body, the virtual brain will act as the man. So, even after the death of a person we can use it for the development of the human society. comprehensive attempt to reverse-engineer the brain of mammalian, so that through detailed simulations the function of brain can be understood. BLUE BRAIN is the name of the world's first virtual brain which means, a machine that can function as human brain. Today, scientists are in research to create an artificial brain that can think, respond, take decision, and store anything in memory. The main aim of this research is to upload human brain into machine. So that man can think and take decision without any effort. After the death of the body, the virtual brain will act as the man. So, even after the death of a person we will not lose the knowledge, intelligence, personalities, feelings and memories of that man that can be used for the development of the human society.
In this paper, we present the complete research work which explains the concept and functioning model of blue brain and the recent research and developments in the process. Human brain is the most valuable creation of God. The man is intelligent because of the brain. "Blue brain" is the name of the world's first virtual brain.
That means a machine can function as human brain. Today scientists are in research to create an artificial brain that can think, response, take decision, and keep anything in memory. The main aim is to upload human brain into machine. So that man can think, take decision without any effort. After the death of the body, the virtual brain will act as the man. So, even after the death of a person we will not lose the knowledge, intelligence, personalities, feelings and memories of that man that can be used for the development of the human society. No one has ever understood the complexity of human brain. It is complex than any circuitry in the world. With the increasing number of people having mental disorders the accuracy to detect the particular mental illness has reduced. Doctors are unable to differentiate between symptoms of Autism and Memory Retardation which is just one such example. One of the main goals of neuroscience is to understand the biological mechanisms responsible for human mental activity

By: M. KOUSHIK REDDY

REMOTE MONITORING OF QUALITY AND POTABILITY OF DRINKING WATER

ABSTRACT:
Water pollution is one of the biggest fears for the green globalizations. In order to ensure the safe supply of drinking water the quality needs to be monitored in real time. In this paper we present a design and development of a low-cost system for real time monitoring of the water quality IOT (internet of things) the system consists of several sensors which is used to measure physical and chemical parameters of water. The parameter such as temperature, pH, turbidity and conductivity of the water can be measured. The measured values from the sensors can be processed by the micro controller. The Arduino model can be used as a micro controller. The sensor detected can be viewed on internet using WI-FI system. LIFI TECHNOLOGY ABSTRACT: Light Fidelity (Li-Fi) is a Visible Light Communication (VLC) based technology that making a light as a media of communication replacing the cable wire communication. ... Li-Fi is based on Visual Light Communication (VLC) that using light emitting diodes (LEDs) to fully networked wireless system.We all know that right now Wi-Fi is the most used technology to connect many devices to the internet. As time comes by, the use of internet-based devices is increased.

This increasing made the capacity of Wi-Fi is reduced due the limitation of radio frequency resources. The more Wi-Fi enabled device is exist, the congestion may occur. In the technology of Wi-Fi we can't add more routers if the user is increased, while we can add the light in Li-Fi. Efficiency and safety of the internet are the dominating issues right now. The rate speed of Li-Fi is 1000 times faster than Wi-Fi. For safety of the internet, Li-Fi is more secure than the Wi-Fi based on the spread of the signal. Li-Fi has a light characteristic that light cannot go through the wall. It is different from the signal of Wi-Fi can go through anywhere. Based on those two technologies, in a simple conclusion is Li-Fi has more secure communication rather than the Wi-Fi. Virtual Reality By: V. V. V. Satish Kumar ABSTRACT: Virtual reality (VR) is a technology which allows a user to interact with a computer-simulated environment, whether that environment is a simulation of the real world or an imaginary world. It is the key to experiencing, feeling and touching the past, present and the future. It is the medium of creating our own world, our own customized reality. It could range from creating a video game to having a virtual stroll around the universe, from walking through our own dream house to experiencing a walk on an alien planet. With virtual reality, we can experience the most intimidating and grueling situations by playing safe and with a learning perspective.

By: DanduVineela,
Naga Siva KyathiAllam

ARTIFICIAL INTELLIGENCE TECHNIQUES FOR IMAGE PROCESSING APPLICATIONS

ABSTRACT:

In the future, intelligent machines will replace or enhance human capabilities in many areas. Artificial intelligence is the intelligence exhibited by machines or software. Artificial intelligence in the last two decades has greatly improved performance of the manufacturing and service systems. Study in the area of artificial intelligence has given rise to the rapidly growing technology known as expert system. Application areas of Artificial Intelligence is having a huge impact on various fields of life as expert system is widely used these days to solve the complex problems in various areas as science, engineering, business, medicine, weather forecasting. The areas employing the technology of Artificial Intelligence have seen an increase in the quality and efficiency. Machine learning is an integral part of artificial intelligence, which is used to design algorithms based on the data trends and historical relationships between data. Machine learning is used in various fields such as bioinformatics, intrusion detection, Information retrieval, game playing, marketing, malware detection, image de-convolution and so on. Compared to traditional machine learning methods, deep learning has a strong learning ability and can make better use of datasets for feature extraction. So we use these techniques in image processing which are used in applications of crack detection on walls, security purpose, medical etc…

By: D.Satyasr
V.prasanna
CH.Sailakshmi

IOT BASED SOLUTION FOR MONITORING THE PESTICIDES ON FRUITS AND VEGETABLES

ABSTRACT:

The intensive development of agriculture means that huge amount of chemical compounds are entering the environment.Pesticides are used to eliminate the pests in agricultural fields and households.They limit many human diseases transmitted by insects.Pesticides are of enormous importance in incresing the agricultural productivity. They are mainly transported by rain and wind. Pesticides do much harm to the environment.Fruits and vegetables are the main crops to be effected by the pesticides.These components are divided into organic and inorganic mainly inorganic chemicals are being used.Due to this the soil salinity is increasing and directly it is targeting the species.

By:MORUSU SWAPNA

RETINA BLOOD VESSEL SEGMENTATION AND EXUDATES DETECTION USING MORPHOLOGICAL AND CLUSTERING WITH NEURAL NETWORK

ABSTRACT:

The condition of the vascular network of human eye is a crucial diagnostic think about ophthalmology. Its segmentation in fundus imaging may be a nontrivial task thanks to variable size of vessels, relatively low contrast. We endorse a DL(Deep Learning)-based totally method for the hassle of detecting blood vessels in fundus imagery, a scientific imaging undertaking that has significant diagnostic relevance. The advantage of this method is that accuracy of segmentation and exudates detection is improved which enables us to detect many diseases like diabetes in early stages. It can be used in Bio medical applications for retinal image analysis; fundus, exudates detection and also for applications like Image Fusion of CT Machine. The difference between the proposed method and the existing method is that it uses both supervised and unsupervised methods stated in the above papers. It is also a combination of both morphological and clustering methods. Thus it provides better edge detection. The accuracy and sensitivity which are the metrics for performance will improve commendably. The existing methods have poor edge detection and the fundus exudates cannot be clustered using those methods. So the proposed method overcomes these by combining a very efficient segmentation, extraction and multistructured morphological processes for effective retinal vessel and exudates detection. Daubachies Wavelet, GLCM Features, Morphological Process, Fuzzy c-means Clustering are the basic methodologies used. The NN classifier, achieves consistently high performance among various methods of supervised statistical pattern recognition. A new sample is classified by calculating the distance to the closest training case; the sign of that time then determines the classification of the sample. Morphological image processing is a collection of non-linear operations related to the shape or morphology of features in an image.

The clustering methods like k means, improved k mean, Fuzzy C Mean (FCM) and Improved Fuzzy C Mean algorithm (IFCM) are proposed. FCM algorithm has additional flexibility for the pixels to belong to multiple classes with varying degrees of membership. Demerit of conventional FCM is time consuming which is overcome by improved FCM. More features may be evaluated using various other feature extraction techniques to further improve the classification accuracy. Various Neural Network models could also be incorporated to pick the simplest Neural Network

By: N.Yamuna,
K.Spandana,
M.Nikita

AUTOMATIC WIRELESS HEALTH MOINTERING SYSTEM IN HOSPITAL FOR PATIENTS

ABSTRACT:
This paper describes a mobile health monitoring system which consists of a portable multifunctional physiological parameters detecting 3AH node and a mobile program for real time data telemetry based on the smart phone with Android operating system .The 3AH node is a health monitoring device embedding Bluetooth module in it and capable of measuring a ECG, B.P, respiration, temperature , motion and almost equal to patient monitoring. In the Android application, we receive physiological parameters such as ECG via the socket connection between device ,the detecting module, we process the received data with special algorithms to get steady waves , we store data on micro SD flash, we display data by wave form and digit by algorithm we release remove data by via TCP/IP protocol. We have evaluated the performance of the monitoring system in capturing, recording, transmitting , display, ambulatory data and found the system to easy to use with high precision.

By: T.AnuSanjeevani ,
Sravan ,
M.Jayanth

5G TECHNOLOGY OF MOBILE COMMUNICATION

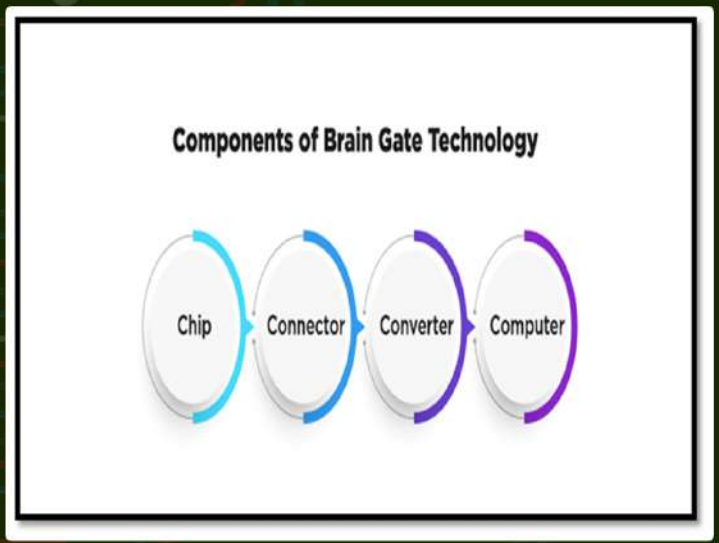
ABSTRACT:
The objective of this abstract is 5g technology of mobile communication. Mobile and Wireless network haveMade Remarkable development in the last few years. The benefits of this 5g technology is very high data rate, very lowLatency, reliability, long battery lifetime and so on.5G technology providing large broadcasting of data in Gbps and its Supports interactive multimedia, voice, streaming video, internet and other.The 5G mobile terminal will have accessTo different wireless technologies at the same time. It has high resolution for cell users. Bi-directional large BW, better And fast solution, 25Mbps connectivity speed are the most amazing features of 5G.

The advanced billing interfaces of 5G technology makes it more attractive and effective.High quality services of 5G Technology based on policy to avoid Error.

By:P.BharatSairam,
D.Gayathri,
N.Pravalli

BRAIN GATE TECHNOLOGY

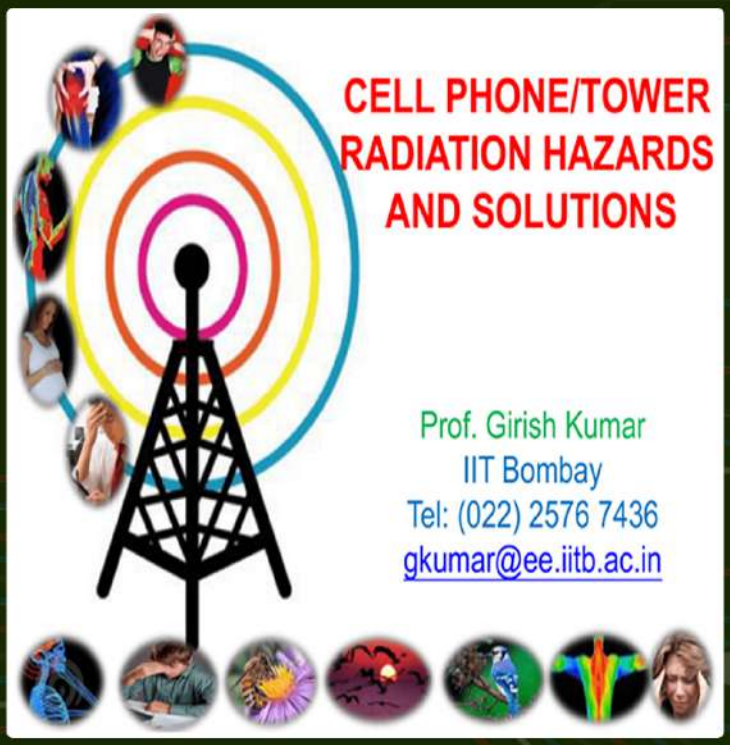
ABSTRACT:
The mind-to-system that allows a quadriplegic man to construct a computer a computer using only his thoughts is a scientific milestone. It was reached, in large part, through the brain gate system. This system has become a bone to the paralyzed. The brain gate system is based on the cyber kinetics platform technology to sense, transmit, analyze and apply the language of neurons. The principle of operation behind the brain gate system is that with intact brain function, brain signals are generated even though they are not sending to the arms, hands and legs. The signals are interpreted and translated into cursor movements, offering the user an alternate brain gate path way to control a computer with thoughts, just an individual's who have the ability to move their mouse. The Brain gate contains tiny spikes that will extend 1mminto brain after being implanted beneath the skull. Monitoring the activities from a group of neurons.



By:P.Bharat Sai Ram,
D.Gayathri,
N.Pravalli

REVIEW ON THE BIOLOGICAL EFFECT OF CELL PHONE RADIATION ON HUMAN

ABSTRACT:
The growth in the use of cellular phone has raised the concerns about the possible interaction between the electromagnetic fields (EMF) radiation and the biological effects on human tissues, particularly the brain and the human immune system. These concerns have induced a large volume of research studies. However, most of the previous review studies are concentrated on negative effects and no published work took in consideration all possible effects caused by the use of cell phones. In this paper we aim to provide review of some studies which investigated the possible negative and positive biological effects of cell phone radiation on human tissues. This review will provide answers for public concerns about the risk of using cell phone. Our conclusion shows that long-term exposure to EMF radiation from a cell phone could cause health effects, such as brain cancer. Some positive health effects due to the exposure to the EMF radiation such as improve bone healing and reduce toxic effects of chemotherapy are highlighted. Finally, some studies have also showed no effect due to exposure to EMF. More long-term studies and analysis are much needed.



By: N.V.S. MOHITH,
SK.ANEES

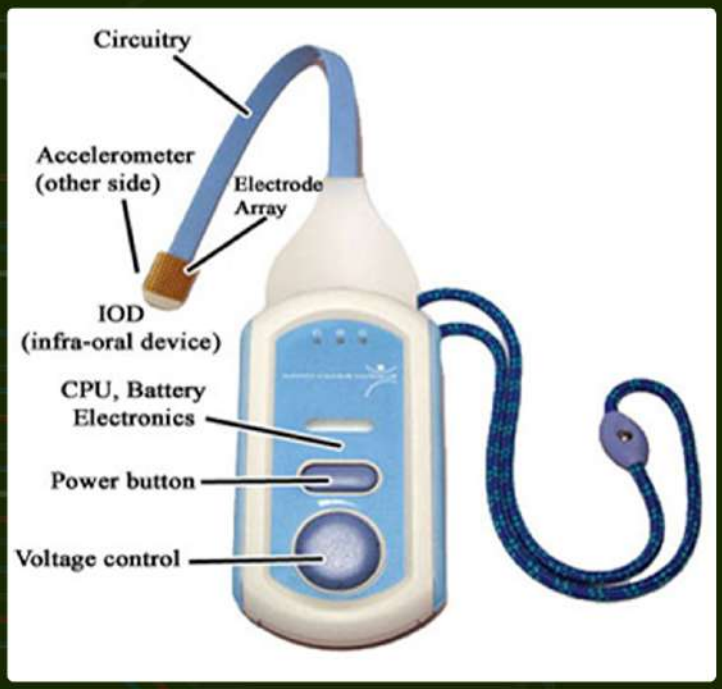
BRAIN PORT DEVICE

ABSTRACT:
Brain Port Device is an electronic lollipop that allows blind to see using the tongue. Brain port is a technology sold by Witcab Inc. Where sensor information can be sent to one's brain via a signal from the brain port. It was initially developed by Paul Bach-y Rita. It captures images using a tiny camera and then converts the image into tiny tingles on the tongue.

The tingles are then sent to the brain which then converts the tingles into pictures. After a few days practicing people, who otherwise couldn't see, were able to make out shapes, read signs and even read letters other than normal use of tongue for tasting food, eating, talking there are also many other uses.

One of them is for sensing of light. It is called as tasting because it can taste the light and sense the objects. It is this property which is used in brain port vision device. The tongue is more sensitive than other skin areas. The tongue was the ideal place to provide information through tactile stimulation. There is a high level of nerve endings in the tongue, similar to a finger. And the tongue is constantly moist, so there is constant electrictric conductivity. It contains three parts one is the digital video camera and second one is the brain port balance and third one is electrode array. Brain port device consists of a digital video camera placed in the pair of glasses. visual data is captured through the camera (1.5cm in diameter). Signals from the camera are then passed to the brain port device along a cable and then to the lollipop-shaped stick, placed on the tongue. Brain port balance consists of power button, control unit, lollipop shaped stick.

Third part is the electrode array it contains square grid of 400 electrodes which pulse according to how much light is in that area of the picture. It converts pictures into electrical pulses and it is placed on tongue. Brain port device does not replace to sense of sight. It uses rechargeable battery like in normal cell phones. There is a hope that this device can make a serious difference for patients whose sight cannot be replaced. Thus, we can hope that blind people can also see this colourful world by using this brain port device

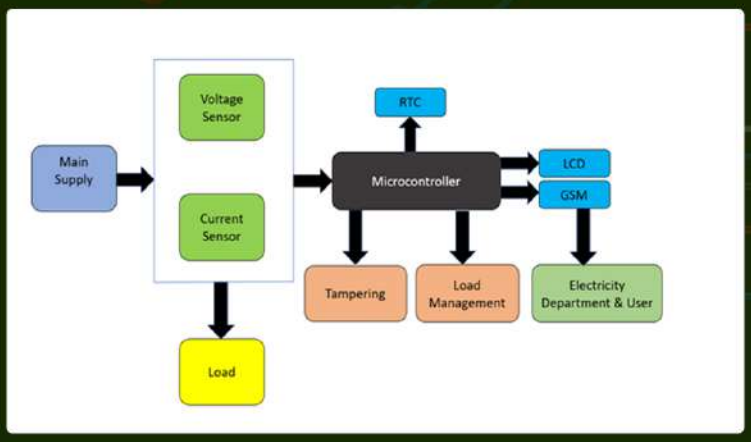


By:PULLAREDDIGARI DEEPIKA

POWER METER BILLING PLUS LOAD CONTROL USING GSM AND METER MONITORING SYSTEM

ABSTRACT:

Our topic is the solution of the problems that are facing in electricity consumption and payments. A person has to come homes and calculate the bill through meter. Detecting illegally power usage. Changing of electrical meters frequently as more bills is consuming which leads to loss of money to government. In today's world calculations of electricity bill is doing manually which takes much time and requires man resources. This can be overcome by using the GSM whose sim card is connected to their mobile.by doing this our mobile is connected to the GSM sim by writing program through the Arduino it can be calculate the electricity bill automatically by setting a particular time i.e., for every one month. The consumer receives the text message of electricity bill



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