VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI

A PROJECT REPORT ON

"RESIDENCE ENERGY CONTROL SYSTEM BASED ON WIRELESS SMART SOCKET AND IOT"

Submitted in partial fulfillment for the award of degree of,

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE &ENGINEERING

Submitted By

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ABSTRACT

From many years all the appliances used in the homes are controlled manually and with the help of electrical switch systems. But this kind of controlling takes a lot of human effort as different devices are controlled from different points and you have to move to attend every single device. The idea now is to make all this system and fully automated. The information appliance is the main direction of development in the appliance control field. Intelligent appliance network has small amount of data and high speed of data transmission.

To avoid resources on green earth being exhausted much earlier by human beings, energy saving has been one of the key issues in our everyday lives. In fact, energy control for some appliances is an effective method to save energy at home since it prevents users from consuming too much energy. Even though there are numerous commercial energy-effective products that are helpful in energy saving for particular appliances, it is still hard to find a comprehensive solution to effectively reduce appliances energy consumption in a house. Therefore, in this system, an intelligent energy control scheme, named the Residence Energy Control System (RECoS) is proposed, which is developed based on wireless smart socket and Internet of Things (IoT) technology to minimize energy consumption of home appliances without deploying sensors. The RECoS provides four control modes, including peak-time control, energy-limit control, automatic control and user control.

The proposed system a device is controlled in home and ittransmits home environment details through the Wireless Sensor Network. ZigBee technology is used, the microcontroller and Embedded C to synchronize all the nodes and make a self-adjusting network of sensors for our smart home services. Based on the thresholds of the sensors the nodes will be generating a signal that will be transmitted to the server and also some action will be taken. When a person in that particular area. The device should be ON. In this system the sensors are motion sensors they are monitoring the condition accordingly and acting according to their set threshold.

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A PROJECT REPORT

ON

"AROGYA CARD"

Submitted by

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ABSTRACT

Good health is important for every individual. Health is more valuable than wealth. Good health is important because a man of health can enjoy great contentment during his life time. Good health, however, contribute to the emotional well-being and happiness of a person. Sometime doctors face life-death situations for the patients where Medical attention is a must for an injury or illness. With respect to health concern, a new system has been introduced, that is Arogya card. The proposed system facilities patients, doctors and hospital. Patient will be provided with an Arogya card on first visit. A specific RFID number will be assigned to every patient which will work as primary key to link to the data base on. Along with the Radio frequency identification number, patient's basic details like name, address, contact number, email and blood group will be saved in the data base which is saved in the cloud with the help of Radio frequency identification card. The data base consists of personal details and medical history from the time of issue of the card. The card will help the hospital to retrieve the history of the patient. When the card is scanned, patient database in the cloud will be linked and an appointment to a doctor can be made. According to the appointment the doctor can update n insert the visited department details, treated doctor's name, diagnosis done, medicines prescribed details. These details will be stored in the cloud database. When patient visits to same hospital or other hospital next time, the Arogya card when scanned will retrieve his/her basic details & previous visit details from cloud.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY,

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A PROJECT REPORT ON

"A MOBILE HEALTH NETWORK DISASTER MANAGEMENT SYSTEM"

SUBMITTED IN PARTIAL FULFILLMENT FOR THE AWARD OF DEGREE OF

BACHELOR OF ENGINEERING

IN

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ABSTRACT

The project "A Mobile Health Network Disaster Management System" aims to enable communication during natural disasters, which causes the rapid destruction of the telecommunication infrastructure. While destruction is inevitable unfolds, which tends to halt the necessary communications between the humanitarian operators and the people in need. In such scenarios, the deployment of wireless networks would provide fast and temporary remedies, however these networks normally do not provide services to the end-users and ordinary people, instead they provide connectivity between groups of end-users administered by a local service provider. From a range of services provided to the end-users by the humanitarian operators, healthcare is by far the top priority.

Health care is considered through the utilization of smart phones in a Mobile Health (mHealth) perspective, which is an emerging concept for monitoring and tracking end user health conditions. A mHealth system used in a tsunami-stricken disaster scenario, including a discussion on the most recent advances of Device to Device (D2D) and LTE-Direct technologies. It accommodates disaster recovery process in an environment without functional telecommunication services. It helps the people from the disaster stricken area.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

BELAGAVI

A PROJECT REPORT

ON

ONLINE INFORMATION SYSTEM

SUBMITTED IN PARTIAL FULFILLMENT FOR THE AWARD OF DEGREE OF

BACHELOR OF ENGINEERING

IN

INFORMATION SCIENCE AND ENGINEERING

By

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Ms. DOLLY	**4AL13IS008**
Ms. MEGHA G	**4AL13IS019**
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ABSTRACT

Online Information System is a unique product for academic institutions. Online Information System works similar to normal Notice Board but as Web Application. The main server of the notice board is handled by the institution and is responsible to provide all the updates. Admin is the one who is responsible to add or retrieve the detailed information about the students. Users of the system could login with unique username and password for updating a system regarding events and other functionality which takes place at institution. Even lecturers can update the notice board by adding results of internals and externals with number of passed as well as failed, notes for each semesters on each subjects, display of attendance and exam updates like schedule for internals and externals, exam hall updates and lecture posts. Keyword based event search mechanism is added to this system which uses substring algorithm to search required events. News flash regarding daily update is a unique feature, here recently added top two images from each branch is displayed. This project also aimed at developing an additional feature called Apply for leave that is of importance to an organization. This fields helps to automate the workflow of leave applications of faculty and their approvals. The periodic crediting of leave is also automated. Student feedback is a unique feature in which students can give feedback about their faculty. There are features like notifications, approval of leave and report generators in this system. The system uses One Time Password generating feature for feedback, this provides security in providing feedback. Authorized members will not be able to know the password of each other. In case of any problem the authorized member can change his or her password.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY,

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A PROJECT REPORT

ON

"Brain Tumor Segmentation using Convolutional Neural Networks in MRI Images"

Submitted By

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ABSTRACT

Among brain tumors, gliomas are the most common and aggressive, leading to a very short life expectancy in their highest grade. Thus, treatment planning is a key stage to improve the quality of life of on cological patients. Magnetic Resonance Imaging (MRI) is a widely used imaging technique to assess these tumors, but the large amount of data produced by MRI prevents manual segmentation in a reasonable time, limiting the use of precise quantitative measurements in the clinical practice. So, automatic and reliable segmentation methods are required; however, the large spatial and structural variability among brain tumors make automatic segmentation a challenging problem.

The proposed system introduces an automatic segmentation method based on Convolutional Neural Networks (CNN), exploring small 3×3 kernels. The use of small kernels allows designing a deeper architecture, besides having a positive effect against overfitting, given the fewer number of weights in the network. It is also investigated the use of intensity normalization as a pre-processing step, which though not common in CNN-based segmentation methods, proved together with data augmentation to be very effective for brain tumor segmentation in MRI images.

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A PROJECT REPORT

On

"PRIVACY PRESERVING AND DATA ANALYSIS IN MEDICAL HEALTH RECORDS"

Submitted by

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ABSTRACT

Personal health record (PHR) is an emerging patient-centric model of health information exchange, which is often outsourced to be stored at a third party, such as cloud providers. However, there have been wide privacy concerns as personal health information could be exposed to those third party servers and to unauthorized parties. To assure the patients control over access to their own PHRs, it is a promising method to encrypt the PHRs before outsourcing. Yet, issues such as risks of privacy exposure, scalability in key management, flexible access, and efficient user revocation, have remained the most important challenges toward achieving fine-grained, cryptographically enforced data access control.

A novel patient-centric framework and a suite of mechanisms for data access control to PHRs stored in semi-trusted servers. To achieve fine-grained and scalable data access control for PHRs, Attribute-based encryption (ABE) techniques are used to encrypt each patient's PHR file. Different from previous works in secure data outsourcing, the focus is on the multiple data owner scenario, and divides the users in the PHR system into multiple security domains that greatly reduces the key management complexity for owners and users. A high degree of patient privacy is guaranteed simultaneously by exploiting multi-authority ABE. The proposed scheme also enables dynamic modification of access policies or file attributes, supports efficient on-demand user/attribute revocation and break-glass access under emergency scenarios. Extensive analytical and experimental results are presented which show the security, scalability, and efficiency of the proposed scheme.

Different organization to be considered equally in that case Distributed ABE needs to design the system. An authority can revoke a user or user's attributes immediately by re-encrypting the cipher texts and updating users' secret keys. The algorithm can be made more efficient and also the user interface can be improved on. As new user requirements emerge new ideas of implementation can be worked on. Though the software meets all minimum constraints, there still remains a scope for improvement.

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A PROJECT REPORT

ON

"LIFTING SCHEME WAVELET APPROACH IN VIDEO STEGANOGRAPHY"

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ABSTRACT

Steganography refers to information or a file that has been concealed inside a digital picture, video or audio file. The staggering growth in communication technology and usage of public domain channels has greatly facilitated transfer of data. However, such open communication channels have greater vulnerability to security threats causing unauthorized information access. Though steganography is a very old method of hiding information behind some object, but still this is very effective for secure data transfer and data exchange. Today steganography is used for digital objects like text, audio, video and images. Achieving more embedding capacity by maintaining the visual quality has become a challenging task. Data hiding methods like integer wavelet transform and histogram shifting shifts part of the histogram, to create space for embedding the secret information bits. The method embeds secret data while maintaining the visual quality well. Integer to integer wavelet transformation is applied to the secret data and wavelet histogram is used for embedding as it has a Laplacian like distribution and embedding can be done on both sides of the histogram to embed more data. Images with more number of points on the wavelet histogram peak can embed more data. The widely used measure PSNR and MSE is used to assess visual quality of the embedded video. The high compression ratio is maintained to improve the embedding capacity.