*International Conference on Recent Innovations in Science, Engineering and Technology- (ICRISET) -21*

***October 20 2021***

# IOT BASED STREET LIGHT SURVEILLANCE SAFETY SYSTEM

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**ABSTRACT:**

With enhancement in internet in terms of bandwidth and speed, Internet of Things has become more efficient technology and knocks the doors of researchers with numerous opportunities and inventions. In recent days safety is one of the major factors that is lacking needs our attention. In recent days, we might have heard about many cases of insecurity for people in these days including theft, kidnapping.etc, have become a threat and provides insecurity to several people. This paper proposes an IOT Based Street Light Surveillance Safety System for these problems. Sound is basically acoustic waves that have frequencies ranging from 1hz up to many tens of thousands of hertz with the upper limit of human being around 20khz. Street lights are robotic framework which automates the security against the crime in public place. Once the sensor senses the sound frequency of danger it activates an alarm that is loud enough to awake the nearby for help. If by chance the alarm becomes ineffective the sensor fixed send danger signal to the police for help and it is capable of tacking the vehicle movement and send signals to the nearby street light such that the person in need of help gets tracked and saved.

**KEYWORDS:**

Street light; Signal control; Sound sensor; Wireless communication; Arduino technology; frequency; Signal transmission.

***ISBN: 978-53-3456-500-5***

*International Conference on Recent Innovations in Science, Engineering and Technology- (ICRISET) -21*

***October 20 2021***

# DRY AND WET AGE-RELATED MACULAR DEGENERATION CLASSIFICATION USING OCT IMAGES AND DEEP LEARNING

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**ABSTRACT:**

The Project proposes the Retinal image analysis through efficient detection of vessels and exudates for RVD analysis. It plays important roles in detection of AMD in early stages, such as diabetes, which can be performed by comparison of the states of retinal blood vessels. Intrinsic characteristics of retinal images make the blood vessel detection process difficult. Here, we proposed a new algorithm to detect the retinal blood vessels effectively. The green channel will be selected for image analysis to extract vessels accurately. The db wavelet transform is used to enhance the image contrast for effective vessels detection. Afterward, morphological operators by reconstruction eliminate the ridges not belonging to the vessel tree while trying to preserve the thin vessels unchanged. In order to increase the efficiency of the morphological operators by reconstruction, they were applied using multistructure elements. A simple thresholding method along opening and closing indicates the remained ridges belonging to vessels. Experimental result proves that the blood vessels and exudates can be effectively detected by applying this method on the retinal images.

**KEYWORDS:**

Retina, Age related Macular degeneration, Duabachies, retinal vasculature disorder, blood vessels.

***ISBN: 978-53-3456-500-5***

*International Conference on Recent Innovations in Science, Engineering and Technology- (ICRISET) -21*

***October 20 2021***

# ARRHYTHMIA CLASSIFICATION OF ECG BEAT USING IMPROVED MULTISCALE CONVOLUTIONAL NEURAL NETWORK

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**ABSTRACT:**

Cardiovascular diseases kill more people than other diseases. Arrhythmia is a common term used for cardiac rhythm deviating from normal sinus rhythm. Many heart diseases are detected through electrocardiograms (ECG) analysis. Manual analysis of ECG is time consuming and error prone. Thus, an automated system for detecting arrhythmia in ECG signals gains importance. Features are extracted from time series ECG data with Discrete Cosine Transform (DCT) computing the distance between RR waves. The feature is the beat's extracted RR interval. Two sets of experiments were conducted. In the first experiment, 153 images were used and in the second with a dataset of 13300 beats from 20 recordings were used for evaluating the performance of classifiers. The dataset consists of 68 instances of left bunch bundle block, 30 instances of right bunch bundle block and 56 normal instances. In this paper, a method of energy extraction using Discrete Cosine Transform was used and RR interval was extracted and used as feature. Using 10-fold cross validation, Frequency domain extracted features are classified using Classification and Regression Tree (CART), Radial Basis Function (RBF), MLP NN and MCNN. The obtained results show that the proposed method is quite efficient where the calculated accuracy score is 90.9% and the comparisons with the state-of-the-art method show that the proposed method outperforms other methods.

**KEYWORDS:**

Electrocardiograms (ECG), Cardiac Arrhythmia, MIT-BIH database, RR interval, Discrete Cosine Transform (DCT), RR Waves.

***ISBN: 978-53-3456-500-5***

*International Conference on Recent Innovations in Science, Engineering and Technology- (ICRISET) -21*

***October 20 2021***

# IOT BASED HEALTHCARE SYSTEM

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**ABSTRACT:**

The IOT based Health Care system For the Elderly is cheapest healthcare device based on the IOT Platform for the patients and doctors. It provides a solution for measurement of body parameters like ECG, Temperature, Moisture, and heartbeat. It also detects the body condition and location of the patients. The mobile application for the patients and doctors contains a very simple GUI interface for reading all the parameters in the mobile or at anywhere in the world by using internet connectivity. In this project we are using various sensors and modules for performing a different type of functions and the "Thing speak". Cloud service is used for storing all the data in the cloud; it provides security and facility of accessing all the parameters at any time which is very useful for the doctors at the time of treatment. This system also generates an alert when it required that means at the time of any critical conditions and notifications about the medicines, location change, conditions etc…

**KEYWORDS:**

IOT, ECG, GUI Interface, Cloud service

***ISBN: 978-53-3456-500-5***

*International Conference on Recent Innovations in Science, Engineering and Technology- (ICRISET) -21*

***October 20 2021***

# AN IOT BASED SMART PARKING SYSTEM USING CLOUD DATABASE

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**ABSTRACT:**

The aim of this paper is to resolve parking issue. The user usually wastes his time and efforts in search of the availability of the free space in a specified parking area. Using GSM and GPS, Vehicular parking is proposed. IR sensors are used in identifying the empty parking slots. Based on the availability of the slot user registration is allowed and based on the slot allocated OTP will be issued to the corresponding user. Thus, the waiting time for the user in search of parking space is minimized. RIFD technology is being used to avoid car theft.

**KEYWORDS:**

GPS, GSM, RFID Technology, IR Sensor, OTP.

***ISBN: 978-53-3456-500-5***

*International Conference on Recent Innovations in Science, Engineering and Technology- (ICRISET) -21*

***October 20 2021***

# ANDROID APPLICATION BASED ELECTRONIC STUDY MATERIALS FOR ENGINEERING STUDENTS

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**ABSTRACT:**

The era of mobile technology opens the windows to the android app. As the mobile phones are emerging, it becomes a part of everyday life. Mobile Phone technology promotes the conventional websites into mobile apps. This paper introduces the android application software specially designed for engineering students. This application provides Electronic study materials for Computer Science and Engineering, Information Technology, Mechanical Engineering, Electronics and Communication Engineering and Electrical Engineering subjects. Through this application Students can learn in online, as well as they download the content in their device for offline preparation. Students can also share the content to other people. Any student can upload the content for the topic or chapter. The new uploaded content will be evaluated by the team and became available to other students. Students can share their knowledge and build the contents. This application also has written content for some subjects. This open source application is user friendly and eases the Students to learn anywhere in and outside of the classroom effectively.

**KEYWORDS:**

Android application, Electronic study materials, Engineering, Mobile Application.

***ISBN: 978-53-3456-500-5***

*International Conference on Recent Innovations in Science, Engineering and Technology- (ICRISET) -21*

***October 20 2021***

# STUDAT - A WEB BASED INTERACTIVE AND MONITORING TOOL

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**ABSTRACT:**

Student database Management System (SDMS) provides a simple interface for maintenance of student information. It can be used by educational institutes or colleges to maintain the records of students easily. The creation and management of accurate, up-to-date information regarding a students' academic career is critically important in the university as well as colleges. Student information system deals with all kind of student details, academic related reports, college details, course details, curriculum, batch details, placement details and other resource related details too. It tracks all the details of a student from the day one to the end of the course which can be used for all reporting purpose, tracking of attendance, progress in the course, completed semesters, years, coming semester year curriculum details, exam details, project or any other assignment details, final exam result and all these will be available through a secure, online interface embedded in the college's website. It will also have faculty details, batch execution details, students' details in all aspects, the various academic notifications to the staff and students updated by the college administration. It also facilitates us explore all the activities happening in the college, Different reports and Queries can be generated based on vast options related to students, batch, course, faculty, exams, semesters, certification and even for the entire college. There are many departments in a college thus but introducing a student web portal will centralize the administration and the entire system will work as one single entity. The paperwork would be reduced and number of workers in each department staff also reduces as one single operator can run this web application.

**KEYWORDS:**

Database, Design, MySQL, Deployment, Software Modelling

***ISBN: 978-53-3456-500-5***