

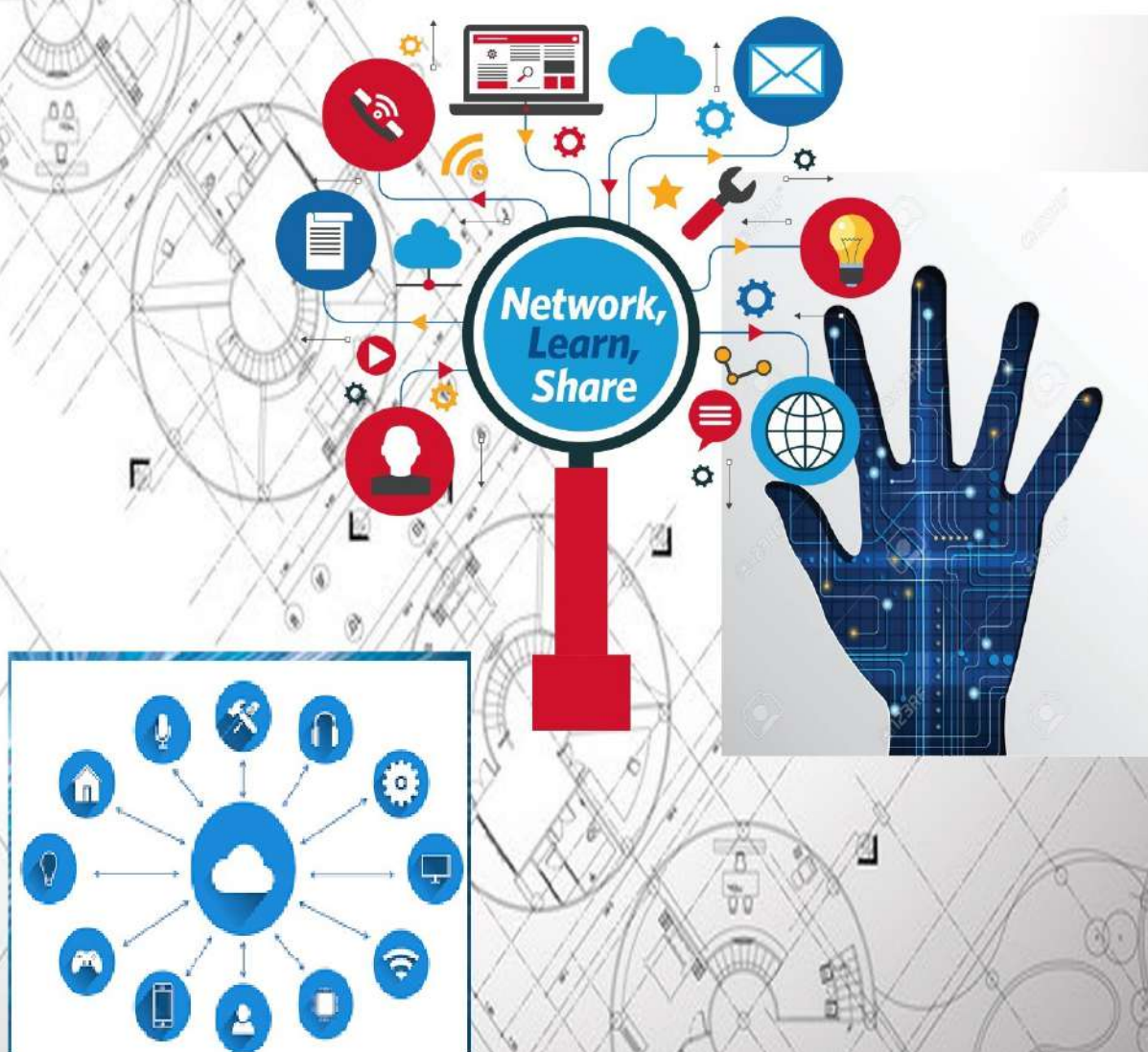
# ELECTRONICS & COMMUNICATION ENGINEERING

# TECH



# CONNECT

June, 2019



LAKIREDDY BALIREDDY COLLEGE OF ENGINEERING  
MYLAVARAM

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## 1. Warehouse Monitoring System

### INTRODUCTION:

Although people often think that a farmer's hard work is finished when the harvest is done the reality is completely different. A new production cycle is known as post harvest management begins. Storage is one of the key farm practices of post harvest management.. Proper monitoring and maintenance of these warehouses is very much needed. The major development challenge is to monitor physical, chemical and biological factors that cause damage to the stored crop yield in rural warehouses. Proper monitoring and maintenance of the rural warehouses is the major market need.

The major factors that cause damage to the stored crop yield are the physical factors like humidity and temperature, chemical factors like volatile organic compounds, and the biological factors like the rodents, insects etc.

We are identifying and trying to reduce the damage at an early stage in the rural warehouses, so that we can reduce the damage to the stored crop yield and save farmers from getting into losses. No one wants to make their efforts and hard work go in vain and get into losses and no one wants to waste food. So we proposed a low cost, simple, efficient and easy-to-use solution to monitor the stored crop in the rural warehouse.

### LITERATURE SURVEY:

A warehouse is a building for storing goods. Warehouses are used by manufacturers, importers, exporters, wholesalers, transport businesses, customs, etc. They are usually large plain buildings in industrial parks on the outskirts of cities, towns or villages.

They usually have loading docks to load and unload goods from trucks. Sometimes warehouses are designed for the loading and unloading of goods directly from railways, airports, or seaports. They often have cranes and forklifts for moving goods, which are usually placed on ISO standard pallets loaded into pallet racks. Stored goods can include any raw materials, packing materials, spare parts, components, or finished goods associated with agriculture, manufacturing, and production. In India, a warehouse may be referred to as a godown.

Warehouses are scientific storage structures especially constructed for the protection of the quantity and quality of stored products. The importance of warehousing are

- **Scientific storage:** The product is protected against quantitative and qualitative losses by the use of such methods of preservation as are necessary.
- **Financing:** Warehouses meet the financial needs of the person who stores

the product. Nationalized banks advance credit on the security of the warehouse receipt issued for the stored products to the extent of 75 to 80% of their value.

- **Price Stabilization:** Warehouses help in price stabilization of agricultural commodities by checking the tendency to making post-harvest sales among the farmers.
- **Market Intelligence:** Warehouses also offer the facility of market information to persons who hold their produce in them.
- **Good harvest:** By storing the harvest in the warehouse helps the farmer to store his harvest for along period of time

#### **MONITORING SYSTEM WITH ARDUINO AND GSM:**

In the present days the usage of arduino and gsm has increased very rapidly. We can implement many projects using them. The gsm frames a network of connection from one point to another point. We can send alert messages from place to another place using GSM module. It is similar to sim slot in our mobile phone. Whenever the parameter value is raised beyond the given threshold value then we get a alert message to the respective mobile in this we can measure the parameters in the warehouse.

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## 2. Detection of Accident using Fuzzy Logic and IOT

### INTRODUCTION

Accidents which are sudden unexpected things that happen in life and can change the fate of a life within a fraction of seconds. Accidents can cause huge damage to not only humans but also to the property and economy. The accident not only gives spot dead situations but also gives disability to those people who injured in the accidents. When accidents are occur immediate requirement is to provide a first-aid emergency service to those people and can make their lives better. The survey conducted by “National Crime Records Bureau, Ministry of Road Transport & Highway” stated one serious road accident in the country occurs every minute and 16 die on Indian roads every hour, two people die every hour in Uttar Pradesh – State with maximum number of road crash deaths and Tamil Nadu is the state with the maximum number of road crash injuries. Day by day the count of accidents and the number of people being injured are increasing. As per the survey the teenagers and young people are dying majorly in the nation. Similarly, the cost associated with fatalities and deaths were staggering in the United States. Research shows that the monetary cost associated with non-fatal injury victim was approximately \$111,870 and \$708,235 for a fatal injury.

The State of Tamil Nadu has recorded highest number of road accidents in 2017, but the number of persons killed in road accident has been highest in Uttar Pradesh. The cost of accidents is approximately \$8 billion annually in India which is approximately equal to 3% of GDP.

The reasons for occurring of an accident are over speed or rash driving, not wearing helmets and car belts, drunk and driving, teenagers who does not have license and overtime duty of some drivers. Traffic rules are not followed at some places which may lead to death of their lives. Some metropolitan cities like Mumbai, Chennai, Delhi, Visakhapatnam and Vijayawada follow the rules strictly but some of the cities which are turning to metropolitan are not following the rules. The speed limit boards in India are for namesake only because the systems do not monitor the speed of vehicle, they are just caution boards on roadsides. The government of India should make prompt and sound decisions in the rules and regulation of traffic which saves the lives of future generations. The problem occurs after an accident is occurred. We are failing in finding the location of accident and providing the immediate first-aid. The accident may occur at less density areas which lacks in knowing of an accident. The idea behind the implementation of project is to save the lives of humans who met accidents and providing the accident data to

police and rescue team. The automated system helps in detecting and notifying whether the accident has been occurred or not. The system setup must be installed inside the car and the detection of an accident is based on the Mamdani fuzzy logic that evaluates, using three parameters (force, acceleration and rotation) to calculate the extent of accident and sends the data (accident status) and the position of the accident to the users who are connected to the local server. So, the users can access the data from server and can check the status. This system eliminates the need of people to intimate the information to police.

#### **RELATED WORK:**

A few scientists have been presented in the equivalent field of research. The thought has been introduced to the world at numerous events yet the absence of execution, finding the perfect area for the framework or different issues have limited the boundless employments of the thought. Several research works are carried out and still work is going on in designing the automated system in different ways. The idea was proposed by many researchers but lack of implementation is not coming to action due to the installation of setup in the vehicles.

The automated design for accident detection in which the driver residing in the vehicle must own a smart phone so that the application in the smart phone which was a fuzzy logic based decision support device will calculate the extent of accident and predict the level of accident that has occurred. The information regarding the mishap is sent to the smart phone by means of Bluetooth module. After knowing the extent of accident, a text message from the mobile phone is sent to the predefined number. The drawback is that the driver must maintain a smart phone [1].

An accident detection system using dynamic fuzzy logic controller. This article will explain the concept of using the fuzzy logic and the parameters that can be watched by means of membership functions and here the dynamic fuzzy logic was based on the zone basis which means taking one particular area and the time where traffic will be more. These constraints were taken into account while building the logic [2].

The system with a microcomputer which was Raspberry pi along with Wi-Fi or internet. Instead of using a smart phone for texting a message, the information can be sent to the user by means of Wi-Fi controller. Raspberry pi which works at high speed than Arduino is an advantage for this project but Arduino is preferable in this project because the equipment is simple and the interfacing is simple with Arduino. Raspberry pi is used for high end applications as it is a microcomputer. The cost is also an important parameter in designing the project. There can be lack of accuracy because of single threshold value [3].

The automated design by using Mamdani fuzzy logic. This discussion clearly explains the fuzzification, linguistic variables, crisp logic, fuzzy logic, fuzzy rules, defuzzification, extracting the crisp values from fuzzy values. The advantage of building the fuzzy logic based on Mamdani logic helps in providing the better results to human inputs. The membership functions were explained with formulae and the membership functions are the graphical representation of the input and output variables [4]. A survey paper which illustrates the accident control algorithms such as Control optimization algorithm, Auto tune algorithm, Adaptive charged system search algorithm which improved the efficiency of the system by implementing these algorithms and the accidents can be minimized to a major extent [5,9,10]. An implementation of traffic light controller using the fuzzy logic which helps in providing the route for injured people by clearing the traffic as every second is precious [6]. The system without a programming processor, they designed the system with ARM7 microcontroller and interfaced the sensors to controller and usage of GSM modem to send the information to the user [7]. The design using IOT for message alerts. But the accuracy cannot be achieved as the traditional values are taken into account rather than extent of accident [8].

The further advancements in the field is incorporating the number of sensors like alcohol sensor module, vibration sensor module and a LCD display to know the level of accident beside the accelerometer display. The another possibility for GPS is by including alternative navigation systems like the Russian GLONASS, the EU's Galileo system or China's compass system. The surveys helps the implementers in giving the analytics of present scenario and the design will be made according the reports which helps in overcoming the problems in current society.

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### 3. Monitoring the Agricultural Parameters using IOT

#### INTRODUCTION

In this automated world we need to help the farmers that provide the basic need and source of life on this earth in such a way that provide efficient results in the field of agriculture. The dangerous effects that make the crop production to be reduced are the content of atmosphere that pollutes the environment in which plants grow. So in order to reduce such effects we need to monitor the amount of such compounds in the soil and in the area of plants grows. Therefore, methane can be considered as the major contributor of temperature increase and the source to result in adverse reduce in the crop production. So at least if we succeed in intimating the presence of such harmful gases we can alert the farmer to get rid of the adverse effects of such gases. Before IOT we used the RFID tags and readers in order to pass the information from one place to other place. After the advancement in sciences they used the IOT technology to monitor the simple things like just to check whether the level of drink in the refrigerator is up to the level or not so that the users in that area could access the information updated. Later on they used to connect the sensors and integrate different operations using open sources; now we can connect this to various embedded the place where we are.

#### LITERATURE REVIEW:

In [1], the system designed uses PIC for the automation purpose so that to check the moisture content in the soil. Finally the status of motor is sent to user through GSM. This system uses PIC which is not as accurate as that when compared to Arduino and does not have any source to update in the website. In [2], the system designed next to this have an automatic irrigation system but does not have the sensing device that can detect the presence of unknown compounds in the field area. In [3-8], these explain about the model that can automatically monitor the amount of moisture level and then according to the requirement the motor is turned on/off until the level reaches the optimum level. The present model will be an extension provided to this. Different papers discussed above use different technologies like microcontroller that are having specific instruction set, PIC that makes the circuit more complex. Finally we can understand to what extent the field production is effected due to presence of unwanted dangerous compounds like methane, carbon monoxide and other dangerous gases in the soil and in the area of the field and the need to design a cost effective and user friendly system that can easily programmed and modified for any further extensions if needed. So after conducting this

survey we can conclude that we need a system to detect the dangerous compounds that effect the field production so that we can use some other pesticides in the very early stages so that to avoid the adverse conditions. The proposed design includes the sensing action and update the information in the website through IOT an open source that can be easily accessed by the user. The objectives of the proposed work are as follows:

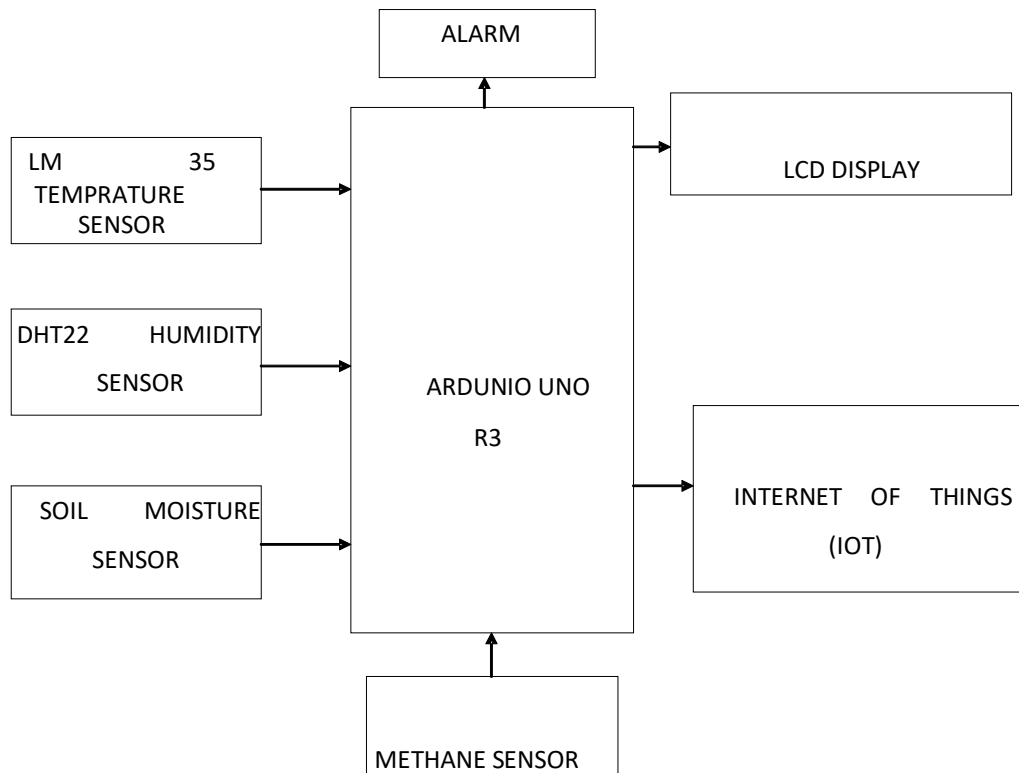
- The main aim of the project is to detect the field ability so that efficient crop production can be achieved from the field.
- To monitor the temperature from time to time and update in website through IOT.
- To design an embedded system used to monitor the agricultural fields.

#### **SYSTEM ARCHITECTURE:**

The agriculture monitoring system is illustrated in following figure, The technology used in this model is Arduino Uno as basic device used to integrate various sensors and update the entire information into the website through an open source cloud using Node MCU (i.e., MICRO CONTROLLER UNIT). The ESP8266 is traditionally used in IOT implementations. This is a low cost Wi-Fi that can connect the things easily. Here we used this component to integrate various sensors namely soil moisture sensor that can sense the information and converts that into digital form that is read by the arduino at the pin which is allotted for soil moisture sensor. Here the values are scaled to a factor and more the value less the soil is wet. The other sensor we used is rain drop sensor which informs the information related to occurrence of rain to the user ,the mechanism involved is that when it is raining the drops connect the printed wiring on the sensor panel that create a short path in the circuit and through this the resultant voltage is sent to the digital converter and corresponding values are drawn at the arduino pin connected to this sensor.

Next comes the gas sensor the major part of the model which detects the presence of unwanted compounds either in the soil or in the environment of crop production in terms of ppm and the detected amount is sent to the appropriate arduino pin in the desired format. When the amount detected is in the scale that effect the crop then we have the buzzer that alerts the user to take certain measures such as to use some pesticides in the field in adequate amount that can not affect the final crop production.

This is the basic open source that everyone can access in which we will be given a channel on to which the entire information will be updated for every particular period of time as per the scheduled session in the program. The output of the moisture sensor will be scaled into further values and the soil with more moisture content will have less scaled value and vice versa.



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## 4.Real Time Automatic Irrigation System

### INTRODUCTION

Agriculture is a major source of income for the economy of a nation. It contributes 16-17% of GDP. About 70% of population in India depend on agriculture. Artificial application of water to the soil for assisting in growing crops is known as irrigation. There are various types in irrigation like drip irrigation, surface irrigation, hill top irrigation, sprinklers. Most of these irrigation practices are done manually by farmers. The farmers cannot judge about the exact amount of water required by the plants and weather. The fresh water are very less on earth these have to be efficiently utilized to make them available for future generations. Already all the metropolitan cities are facing water problem and lack of ground water resources. Moreover a lot of amount of water we supply as irrigation is getting evaporated without being suck by the roots. Many plants are being damaged because of under irrigation or over irrigation. The main proposal of this project is to develop a real time autonomous system which calculates the moisture value present at the roots of the plant and supplies the adequate amount of water to the crop. The complete field is divided into sectors. Each sector is associated with a moisture sensor and solenoid valve. Soil moisture and irrigation to a particular sector are taken as major emphasis. The proposed project can be used for any type of irrigation

### OBJECTIVES :

- Reduce human effort in irrigation.
- Effective utilization of water resources.
- Supplying the required amount of water to plant (Not high or low).
- Converting irrigation from manual to autonomous work.
- Effective utilization of electricity.
- Performing irrigation based on sudden changes in environment & natural calamities

### LITERATURE SURVEY:

In [1] the humidity and soil moisture sensors are placed in the root zone of the plant. The system is completely autonomous. Based on the sensed values the microcontroller preforms the action of switching the motor on/off. The motor pump pumps the water to the plant when the moisture level reaches the desired value then the motor gets turned off automatically. But this system don't intimate the farmer about the field status. In [2] moisture and temperature at desired location calculated and sent to the farmer. Though this system indicates farmer about the field status controlling of motor has to be done

manually by farmer. The autonomous system is removed and manual mode of operation of the system comes into picture. If farmer neglects any message or if any information is not delivered to the farmer then he/she may not switch on the motor resulting to loss of plants. In [3] the motor is ON/OFF automatically but it consists of only single sensor. The main aim of every project is to make it applicable in real time placing of a single sensor and a single motor will not do any work in real time.

#### **SYSTEM OVERVIEW:**

This topic is based on real time automatic irrigation system with mobile alert to farmer. This system supplies water to the required sector of field based on the moisture sensor valve at that particular sector. The sensors senses the moisture level at their sectors and transmit the data to the Arduino. The Arduino analyses the data if the moisture level at a particular region is less than desired value then it excites the solenoid valve belonging to that particular sector and switch on the motor. A message will be send to the farmer whether the sector is dry. The GSM module will send a message only when there is a state change in sector i.e., from DRY to WET or from WET to DRY. Again when the desired moisture level is achieved the motor pump and solenoid valve are made to OFF. A message to the farmer that sector is wet is sent.

**HARDWARE DETAILS** – The hardware includes Arduino UNO which works a microcontroller. It consists of FC – 28 moisture sensors which senses the moisture contents. A relay board, used for switching the solenoid valves and motor ON and OFF. Solenoid valves are used for each sector these are inductive coils and allow water to flow through them when supply is given. A 0.5hp motor pump is used to supply the water.

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## 5.Intelligent Home Automation

### INTRODUCTION

In these days home automation technology plays an important role in our life. This is used to control our home appliances automatically without human involvement. Home automation mechanism is not only referring to reduce human effort but also time saving technique. The main objective of home automation mechanism and security system is controlling home appliances automatically based on climatic and security conditions available in the room. This mechanism helps the owner in case a burglar enters in to the house by sending a message which will inform them to protect their home from burglars. The system also helps old people by controlling home appliances automatically as they do not need to go to switch board to turn the appliances ON or OFF.

Main purpose of this home automation is to “SAVE ELECTRICITY”. With this technology everyone can control the home appliances or office equipment automatically.

### OBJECTIVE:

- To provide security to the house.
- To provide an alert when there is any gas leakages and fire accidents.
- Controlling appliances automatically based on room conditions.
- Reducing power wastage.
- Implementing with low cost.

Providing intimation to owner when there is any miscellaneous activity.

### LITERATURE SURVEY:

This paper [1] is beautifully designed with home security system. But there is no scope to control appliances available in the home, there is no power saving mechanisms in it and cost is also very high. Real time intelligent home automation is extension of this project by providing controlling mechanism and power saving techniques.

It [2] is mainly focus on controlling appliances in home by mobile phone and some other techniques through internet. But there is no security feature to automation technique. This drawback is rectified in Real time intelligent home automation and also included some other features like controlling appliances automatically.

It [3] is also having a feature of controlling appliances through internet of things. But there is no security feature in it. This drawback is rectified in Real time intelligent home automation by sending an SMS to owner when there is any miscellaneous activity.

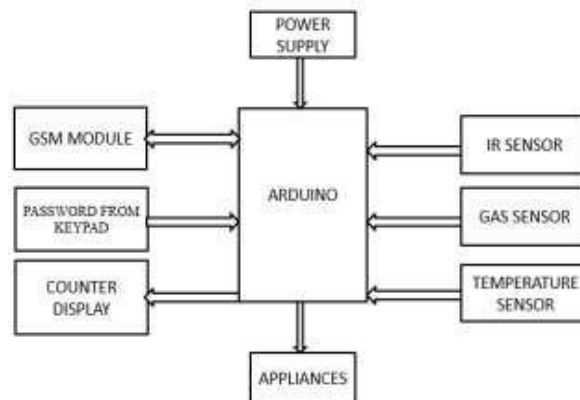
## SYSTEM OVERVIEW:

This article is based on real time intelligent home automation. It mainly consists of two parts. First is about person detection whether he is an authorised person or not based on password entering system. If the entered password is matched with the predefined password then he is an authorized person otherwise it detects as an intruder then sends a SMS to the owner.

Second part consists of controlling appliances. Whenever entered password is correct then based on room conditions appliances will automatically switches on/off. If gas concentration is greater than normal value then buzzer will be goes to high irrespective of person is present in house or not.

## HARDWARE DETAILS:

The construction of this project is on Arduino UNO as a microcontroller. First part of the circuit consists of IR sensors to count the number of persons entering into the room, keypad to enter password and LCD to display the password. Whenever entered password is correct it enables second circuit. Otherwise an alert will be sent to house owner by GSM. Second part of circuit consists of temperature sensor used to know the room temperature, LDR used to know the light intensity, gas sensor to know the gas leakage happening or not. Based on these conditions relays will be in high/low states. Relay is used to handle AC powered appliances from dc voltages.



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## 6. Medical Image Fusion

### INTRODUCTION

Image Fusion alludes to the procedures that coordinate correlative data from numerous pictures information with the new final image is appropriate and meets the end goal of human visual discernment and the computer processing undertakings. The fused image ought to have progressively total data which is increasingly valuable for human or machine observation. The benefits of image fusion [1][2] are improving dependability and reliability. In medical imaging, Computed Tomography (CT), Magnetic Resonance Imaging (MRI), Positron Emission Tomography (PET), Single Photon Emission Computed Tomography (SPECT) and different methods of therapeutic pictures that reflect human data from different positions. In this paper, we will present and discuss the goals in fusing CT scan image and MRI scan image. Up until this point, many image fusion processes have been proposed in the writing. A portion of the techniques is identified with multimodality medical image fusion. The image fusion mainly governs three types, such as pixel, feature and decision level techniques. The pixel level image fusion method is normally utilized for medical image fusion, due to simple execution and computational proficiency.

### IMAGE FUSION IN MEDICAL FIELDS:

Medical Image Fusion can be ordered into two principal branches: spatial fusion and multi-resolution fusion strategies. The two classifications have some basic qualities which elucidate the common points of interest and impediments of these strategies. Spatial fusion techniques give straightforward strategies to execution and produce exceptionally fused images with increasingly spatial data. But the fundamental disservices of spatial fusion strategies are obscuring impact that may happen in the blurring of the image and pixel degradations[8,9]. On the other hand, the multi-resolution technique is used to intensify spectral data in the combined image by improving picture qualities of brightness, contrast and higher SNR. Anyway, these strategies are difficult to implement and give less spatial resolutions.

Image fusion methods are grouped into various levels: lower, middle, and higher; or pixel, feature, and choice levels. Recently specialists have demonstrated that it is progressively significant to fuse objects or regions instead of pixels values. Numerous references can be found in the region based calculation over the pixel values based calculation as it is insensitive to the noise.

### FUSION CATEGORIES:

Use Multi-view fusion: The photographs to be entwined are of a similar method and taken in the meantime, yet under substitute conditions and the focal target of the blend system in this class that have the essential data under the different conditions in the combined picture [4]. Multi-temporal fusion: The photographs to be joined are of a relative procedure also, yet they were taken at various events For this condition the mixing framework is finished by subtracting the no under two pictures, and the basic motivation driving the blend for this situation is to perceive changes in the scene on various occasions.

Multi-focus fusion: The pictures to be fused are isolated into regions and the fusion is connected to should have a combined the picture that is wherever at core interest.

Multi-modal fusion: The pictures to be combined are of alternative modalities and the fundamental objective in this class is to have a merged picture that contains data however much as could reasonably be expected from the different modalities without any loss of information in the general meaning of the picture.

#### **SOFTWARE:**

Python is a high level interpreted programming language. It has plan rationality that makes the users compose the code all around dependable. Python includes a dynamic typing in which the memory is naturally organized by the software. Python was intended to be profoundly extensible. This conservative modularity has made it specially well known as a method for adding programmable interfaces to existing applications.

Python is indented to be an adequately clear language. Its structuring is normally uncluttered, and it as often as possible uses English catchphrases where distinctive dialects use accentuations. As opposed to various distinctive languages, it doesn't use curly brackets to delimit the code of any blocks of statements, and semicolons after each statement are not necessary. It has less syntactic exceptions and uncommon cases than C. As the most famous system of the image fusion, the multiscale disintegration techniques have grown rapidly as of late, for example, Discrete Wavelet Transform (DWT), Framelet Transform, Contourlet Transform. Tragically, transform based strategies produce poor combination results within the sight of noise and it is hard to pick the decomposition levels.

#### **DISCRETE WAVELET TRANSFORMATION:**

The One of the far-reaching changes in the processing of the image is wavelet transform. Wavelets might be utilized to obtain multi-scale and multi-resolution tasks, and it is a method for time recurrence localization.

DWT usage can be spoken to as portrayed in figure 2. The signal experiences two

digital channels; out of which, one acts as a high pass filter which gives information on higher frequencies, and other as low pass filter that gives data on lower frequencies, and then those two are trailed by subsampled by a multiplier of 2 that implies that the length of the input signal will be half of the past one. This procedure is known as the investigation procedure, and the turnaround procedure called Synthesis process. The two digital channels are used: a high pass and low pass channels. Yet, before them, we apply the upsampling process is connected by a multiplier of 2, and afterward, after the channels, 2 signs are added to frame the input signal once more. Examination and union procedures are repeated many times upon our requirement, and in each progression, the info is the low pass channel yield of the past advance, and for this situation, each progression is known as an order(order 1, order 2,... ., order n)

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## 7. Adaptive Speech Noise Cancellation

### INTRODUCTION

In this world content is the king and information is the wealth. Whatever the kind of information is supposed to communicate well between the source point to destination point. In the midway the content suffers due to many reasons. In Signal processing we knew the betterment of digital signal processing over analog signal processing. Because of the convenient in storage, transmission and conversions of the digital signals, instead of analog one digital is preferred and processed. But it is also suffering during these conversions in source encoding and channel encoding. Signal gets effected because of bit errors. And also, in processing of the transmitted signal it is gets corrupted because of the added noise. In Signal Processing field the most challenging question is how to cancel out the noise which corrupts the speech from surroundings.

### RELATED WORK

In signal processing, noise is the common term for undesirable (and, obscure) alterations that a signal may suffers during capturing, storage, transmission, preparing, or conversion. In some cases, the word is additionally used to mean signals that are irregular and carrying no helpful data; regardless of whether they are not meddling with different signals or may have been presented deliberately, as in comfort noise. Noise cancellation, the recuperation of the first signal from the noise ruined one, is an extremely shared objective in the plan of signal processing frameworks, particularly in filters. Noise may emerge in signs important to different scientific and specialized fields, regularly with explicit highlights: Noise (sound), for example, "hiss's" or "hummm's", in sound signs. Background Noise is added because of false sounds during the capturing of the signal. Comfort noise is added to voice correspondences to fill quiet gaps in communication. Electromagnetically-excited noise and audible noise are added because of electromagnetic vibrations in frameworks including electromagnetic fields.

For example, let us assume that two people are communicating by means of a mobile. Because of the air flow and the sounds which are produced by other people to do their own work like opening or knocking a door, vehicle horns and engine sounds. These all sounds also captured by the micro phone of the person who is talking from source side. These are not necessary to the other person who is listening from the other end. Due to the intensive noise power speech signal is gets effected. If the SNR is unity or less than that of unity it is not at all possible to hear the speech. If it is the greater than unity we can easily reconstruct the speech signal. In general, human conversation is in the order of 40-60 db. If the surrounding noises levels are more than or equal to 82.5 dB

the speech signal suffers severe noise problem. Studies in Germany [7] and other industrialized countries made surveys on noise just because of the levels of noise is far greater than 85 dB in those areas. There by the workers who ever working in that intensive noise conditions suffering from the hearing problems. Some of the workers who are working for hours and years getting permanent deafness. It is becoming a major problem in workers lives. So, it makes the engineers to work on noise cancellation [6] devices and mechanisms. There are many kinds of mechanisms and devices too. People made ear muffles and noise less machines or by putting the machines in a sound blocking chambers. but every kind of invention worked well for only live noise cancellations. If the situation comes for signal processing microphones are capturing every kind of disturbances in the surroundings. It's been a problem in signal processing and the research is ongoing rigorously. Even a processed signal also gets corrupted by noise [8]. So, the noise content is more in the desired signal rather than the original signal. For that it is needed to cancel out the noise by using some mechanisms. There are many kinds of mechanisms like Such as Passive noise cancellation, Active noise cancellation, [2] Digital noise cancellation, Audio signal noise cancellation, Additive noise cancellation and adaptive noise cancellation mechanisms. For every mechanism they have their own way of cancelling the noise. We adopted the adaptive noise cancellation mechanism and by using three algorithms (LMS, JAYA & PSO). The very first one very well-known algorithm but the thing is implementation of the algorithm in a better way to cancel out the noise. And the remaining two are of bio-inspired algorithms. Already traditional and conventional optimization techniques such as Newton Raphson Method, Simpson and Trapezoidal methods are in existence. But the creatures that are living on this earth have their own and efficient intelligence to do the things on their own in an efficient way. So, people by observing them and yielding the intelligence of creatures to algorithms and serving the best in optimization of any real time functions.

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