VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590010

PROJECT REPORT ON

"ZINC OXIDE AND ZINC INDIUM SULFIDE ($ZnO@ZnIn_2S_4$) CORE-SHELL NANOCOMPOSITE FOR PHOTO ELECTROCHEMICAL ENERGY HARVESTING"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING

IN

ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

AKSHATHA RANGANATH	4AL17EC007
CHETHAN KUMAR	4AL17EC021
DHAVALA	4AL17EC027
MAHESH H	4AL17EC048

Under the Guidance of

Dr. MRINMOY MISHRA

Associate professor

Department of E&C Engineering

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ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

2020-2021

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MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

*Certified that the project work entitled "***ZINC OXIDE AND ZINC INDIUM SULFIDE ($ZnO@ZnIn_2S_4$) CORE-SHELL NANOCOMPOSITE FOR PHOTO ELECTROCHEMICAL ENERGY HARVESTING***" is a bona fide work carried out by*

AKSHATHA RANGANATH	**4AL17EC007**
CHETHAN KUMAR	**4AL17EC021**
DHAVALA	**4AL17EC027**
MAHESH H	**4AL17EC048**

in partial fulfillment for the award of **BACHELOR OF ENGINEERING** in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Dr. Mrinmoy Mishra	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, Moodbidri - 574 225	Alva's Institute of Engg. & Technology Mijar, Moodbidri - 574 225, D.K.

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

Solar light is an ideal energy source to overcome the crisis of energy shortage and severe environment problems. In the past decades, photocatalysis technology has aroused tremendous interests. ZnO nanomaterial is the most widely used catalytic material for a variety of photocatalytic applications such as water splitting, self-cleaning, wastewater treatment, bacterial inactivation, and air and soil purification. The reasons behind the frequent use of ZnO are its low cost, long-term chemical stability, and nontoxicity. As a layered structure ternary metal chalcogenide, zinc indium sulfide ($ZnIn_2S_4$) is a typical visible-light-responsive photocatalyst which has a tunable band gap for wider light absorption. Recently, $ZnIn_2S_4$ has been widely utilized in photocatalytic applications. Its photocatalytic performance is largely dependent on its structure, morphology and optical characteristics. To further improve the efficiency of carrier generation and separation of charge carriers the $ZnIn_2S_4$@ZnO core-shell nanocomposite needs to be prepared.

This project the synthesis of Core shell nanomaterial by using chemical precipitation method is done as it is cost-effective and environmentally friendly. Nanomaterial based on thin film fabrication is done which is used as the working electrode in the work station. Application of thin film is energy harvesting. We also show the results of different analysis done with the novelty material synthesized and also discusses its surface morphology.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

DESIGN AND IMPLEMENTATION OF SELF BALANCING MED-BOT

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
AKSHATHA M DESHPANDE	4AL17EC006
GAGAN M K	4AL17EC032
NICHENAMETLA BHARGAVI	4AL17EC061
SWASTIK R GOWDA	4AL17EC091

Under the Guidance of
Mr. SANTHOSH S
Assistant Professor
Department of E&C Engineering

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

2020-2021

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled **DESIGN AND IMPLEMENTATION OF SELF BALANCING MED-BOT** *is a bona fide work carried out by*

AKSHATHA M DESHPANDE	**4AL17EC006**
GAGAN M K	**4AL17EC032**
NICHENAMETLA BHARGAVI	**4AL17EC061**
SWASTIK R GOWDA	**4AL17EC091**

in partial fulfillment for the award of BACHELOR OF ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mr. Santhosh S	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H. O. D. Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	PRINCIPAL Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225, D.K

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

Whenever any disasters take place like floods, there is a need to design appropriate product which helps the rescue team to transport medicines to the effected people. The rescue team usually will be focusing on saving people in flood spots, but the people who have been saved and are in the rescue camps need proper medication and their necessities have to be taken care of. Also there will be least amount of rescuers available to save people during floods. In such scenario it becomes difficult to the rescue team to focus on saving people who are stuck in floods and also taking care of people who are effected and are in camps.

This project is based on a development of Self Balancing two wheeled bot. In particular, the focus is on the electro-mechanical mechanisms & control algorithms required to enable the robot to perceive and act in real time. The two wheeled self balancing bot is an example of advanced development in the field of robotics. The concept of two-wheel self-balancing robot is based on Inverted pendulum theory. This type of robot has earned interest and fame among researchers and engineers of worldwide as it based on such a control system that is used to stabilize an unstable system using efficient micro controllers and sensors. These robots provide exceptional robustness and capability due to their smaller size and power requirements. These types of implementations find applications in several purposes such as surveillance & transportation.

This paper proposes a system that will act as a helper hand to the rescue team in the flood affected areas. The Proposed System will be able to carry medicines and necessary items to each bed in the rescue camps. Because of this kind of system the flood effected people can get quick medications. As there will be less availability of people in the rescue team, this kind of bots helps for transportations with less human assistance.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"DESIGN AND IMPLIMENTATION OF KIDNEY STONE DETECTION USING IMAGE PROCESSING"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
Dhamini C L	4AL17EC025
Lepakshi T V	4AL17EC044
M V Ramya	4AL17EC045
Rachana C H	4AL17EC108

Under the Guidance of

Mr. ANEESH JAIN M V
Asst. Professor
Department of E&C Engineering

ALVA'S

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

2020-2021

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

*Certified that the project work entitled "***DESIGN AND IMPLIMENTATION OF KIDNEY STONE DETECTION USING IMAGE PROCESSING***" is a bona fide work carried out by*

Dhamini C L	**4AL17EC025**
Lepakshi T V	**4AL17EC044**
M V Ramya	**4AL17EC045**
Rachana C H	**4AL17EC108**

in partial fulfillment for the award of **BACHELOR OF ENGINEERING** in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mr. Aneesh Jain	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H.O.D. Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	PRINCIPAL Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225.

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

A kidney stone forms when too much of certain minerals in your body accumulate in your urine. When human is not well hydrated, your urine becomes more concentrated with higher levels of certain minerals. When mineral levels are higher, it is more likely that a kidney stone will form. Kidney stones typically form in the kidney and leave the body in the urine stream.

In 3D medical imaging, anatomical and other structures such as kidney stones are often identified and extracted with the aid of diagnosis and assessment of disease. Automatic kidney stone segmentation from abdominal CT images is challenging on the aspects of segmentation accuracy due to its variety of size, shape and location. The performance of 3D organ segmentation algorithm is also degraded by the image complexity containing multiple organs and because of their huge size. The current need is a preprocessing algorithm to assist the segmentation process. The objective of the present study was to develop reader independent preprocessing algorithm for kidney stone detection and segmentation in CT images.

The input data is a CT scan from the patient, which is a high-resolution 3D grayscale image. The algorithm developed extracts the regions that might be stones, based on the intensity values of the pixels in the CT scan. This process includes a binarizing process of the image, finding the connected components of the resulting binary image and calculating the centroid of each of the components selected. The regions that are suspected to be stones are used as input of a CNN, a modified version of an ANN, so they can be classified as stone or non-stone. The parameters of the CNN have been chosen based on an exhaustive hyperparameter search with different configurations to select the one that gives the best performance.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"DESIGN AND IMPLEMENTATION OF GESTURE VOCALIZER USING SMART GLOVE"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
BRUNDA H Y	4AL17EC012
DISHA	4AL17EC029
DIVYASHREE L V	4AL17EC030
NAMRATHA J NAIR	4AL17EC058

Under the Guidance of
Mr. SANTHOSH S
Assistant Professor
Department of E&C Engineering

ALVA'S
Education Foundation

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

2020-2021

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

*Certified that the project work entitled "***DESIGN AND IMPLEMENTATION OF GESTURE VOCALIZER USING SMART GLOVE***" is a bona fide work carried out by*

BRUNDA H Y	**4AL17EC012**
DISHA	**4AL17EC029**
DIVYASHREE L V	**4AL17EC030**
NAMRATHA J NAIR	**4AL17EC058**

n partial fulfillment for the award of **BACHELOR OF ENGINEERING** in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mr. Santhosh S	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H. O. D. Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	PRINCIPAL Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225, D.K

EXTERNAL VIVA

Name of the Examiners	Signature with date
.....	.....
.....	.....

ABSTRACT

People have a characteristic capacity to see, listen and exchange information with their outer environment. Lamentably, there are a few people who are differently-abled and won't be able to utilize their senses to the most ideal degree. Such individuals rely upon different methods for interaction like gesture-based communication. This presents a significant barrier for individuals in the deaf and mute networks when they attempt to take part in association with others, particularly in their instructive, social and professional working atmosphere. Hence, it is important to have advanced gesture recognition to make communication between both parties effective and efficient, which could help diversely abled individuals in their day-by-day lives by making an interpretation of their signals into significant English letters and words.

This project proposes a system that will help the deaf and mute to use a device that can translate their gestures into text and voice in the form of the data glove which is affordable, simple to use and is not a burden in terms of aesthetics. Using Arduino, flex sensors, accelerometer and an app that can translate the received gestures into text and voice, the number of components used in the traditional data glove can be significantly reduced. This reduction in the number of components and usage of low cost elements drastically reduces the price of the data glove which is very affordable to a person who is earning an average wage. The technology of gesture conversion using computer vision requires proper environment to be setup to capture the gestures along with a lot of computations. Additionally, any device with this technology is not portable. Hence data glove is chosen over computer vision technology.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"DESIGN AND IMPLEMENTATION OF COVID19 SAFETY AMALGAMATION"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
BHOOMIKA RAMACHANDRA HEBBAR	4AL17EC010
AKSHAN SANDEEP D'SOUZA	4AL17EC005
CHANDAN C	4AL17EC015
LAVANYA B	4AL17EC043

Under the Guidance of
Mr. SACHIN K
Assistant Professor
Department of E&C Engineering

ALVA'S
Education Foundation®

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

2020-2021

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

*Certified that the project work entitled "***DESIGN AND IMPLEMENTATION OF COVID19 SAFETY AMALGAMATION***" is a bona fide work carried out by*

BHOOMIKA RAMACHANDRA HEBBAR	**4AL17EC010**
AKSHAN SANDEEP D'SOUZA	**4AL17EC005**
CHANDAN C	**4AL17EC015**
LAVANYA B	**4AL17EC043**

in partial fulfillment for the award of **BACHELOR OF ENGINEERING** in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies theacademic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mr. Sachin K	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**

H.O.D.
Dept. Of Electronics & Communication
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225

PRINCIPAL
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225, D.K

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

Now there are lot of shops, offices and institutions are reopening again after the corona lockdown, many businesses are faced with the necessity to supply the most effective possible protection for his or her staff and customers. Face masks and temperature of the person checks play a crucial part within the protection effort. While this is often already done routinely used in a large scale at airports and railway stations, many businesses and institutions are struggling to fulfill the challenge. Mask monitoring often requires additional staff resources. At an equivalent time, temperature of the person checks by staff accompanies certain risks in terms of hygiene and data privacy. Therefore, the usage of face masks and sanitizers has shown positive results when it involves disease spread reduction. Many protection and safety measures were taken by governments so as to scale back the disease spread, like obligatory indoor mask wearing, social distancing, quarantine, self-isolation, limiting citizens movement within country boarders and abroad, often alongside prohibition and cancellation of giant public events and gatherings. From workplace behavior to social relations, sport and entertainment, corona virus disease poses many changes to our everyday routine, habits and activities.

Proposed system is a fully automated temperature scanner and face mask detection entry provider system. In this system we make use of a contactless temperature scanner and a mask monitor. A person won't be provided entry without temperature and mask scan. Only person having both conditions is allowed inside. The system uses temperature sensor and camera connected with a raspberry pi system that regulates the entire operation. If an individual is flagged by system for top temperature or no Mask the system gives buzzer alert and bars the person from entry and also, the face mask worn and temperature of person is normal then sanitizer is sprayed.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"DESIGN AND IMPLEMENTATION OF MICRO WEATHER STATION"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
Abhishek M Shastry K	4AL17EC002
Abhishek Vasudev Mahendrakar	4AL17EC003
Akshay	4AL17EC008
K Muthu	4AL17EC038

Under the Guidance of
Mrs. Vijetha T S
Asst. Professor
Department of E&C Engineering

ALVA'S
Education Foundation

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

2020-2021

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled "**DESIGN AND IMPLEMENTATION OF MICRO WEATHER STATION**" *is a bona fide work carried out by*

Abhishek M Shastry K	**4AL17EC002**
Abhishek Vasudev Mahendrakar	**4AL17EC003**
Akshay	**4AL17EC008**
K Muthu	**4AL17EC038**

in partial fulfillment for the award of **BACHELOR OF ENGINEERING** in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mrs. Vijetha T S	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H. O. D. Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	PRINCIPAL Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

The advancement of Internet of Things (IoT) has made a major impact on technology. It collects an enormous amount of data which can be used in an application. One such system is Micro Weather Station, which gives us different environment variable values such as temperature, humidity, soil moisture, Ultraviolet (UV) radiation, air pressure, air quality, and rainfall. Initially research or advancements done on weather monitoring were limited, but over the last century it has evolved into a well-organized and professional global activity that reflects its crucial importance for a wide range of economic, environmental, civil protection and farming activities. Due to human activities these days there is a drastic change in the climate, hence an accurate and cost-efficient system is needed which is used to monitor the changes in the environment. The application of weather station is not just bounded for getting the live data and prediction of weather, but also includes the advancement in the agricultural sector and the military applications. Cloud storage technology and Geo-tagging have made it much simpler to get the data of any place at any time.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"DEVELOPMENT OF POLYANILINE COMPOSITE BASED HUMIDITY SENSOR"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
Abhishek	4AL17EC001
Bhavith	4AL17EC009
Jagadeesha Hegde	4AL17EC036
Kishan Shetty	4AL17EC041

Under the Guidance of

Mr. Aneesh Jain M V

Asst. Professor

Department of E&C Engineering

ALVA'S

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

2020-2021

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

*Certified that the project work entitled "***DEVELOPMENT OF POLYANILINE COMPOSITE BASED HUMIDITY SENSOR***" is a bona fide work carried out by*

Abhishek	**4AL17EC001**
Bhavith	**4AL17EC009**
Jagadeesha Hegde	**4AL17EC036**
Kishan Shetty	**4AL17EC041**

in partial fulfillment for the award of **BACHELOR** OF ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING of** the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mr. Aneesh Jain M V	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H. O. D. Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	PRINCIPAL Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225. D.K.

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

Humidity sensors have gained increasing applications in industrial processing and environmental control. For manufacturing highly sophisticated integrated circuits in semiconductor industry, humidity or moisture levels are constantly monitored in wafer processing. There are many domestic applications, such as intelligent control of the living environment in buildings and laundry, cooking control for microwave ovens, etc. In automobile industry, humidity sensors are used in rear window defoggers and motor assembly lines. In medical field, humidity sensors are used in respiratory equipment, sterilizers, incubators, pharmaceutical processing, and biological products. In agriculture, humidity sensors are used for green-house air-conditioning, plantation protection, soil moisture monitoring, and cereal storage. In general industry, humidity sensors are used for humidity control in chemical gas purification, dryers, ovens, film desiccation, paper and textile production, and food processing

A new processable and humidity sensitive chitin–polyaniline blend has been developed. Polyaniline is blended with chitin by solution blending method. The free standing films of blends are stable under ambient condition. The characterization of the blends is done by UV–vis absorption spectrum, FTIR, conductivity studies, thermogravimetric analysis and SEM. Spectroscopic analysis shows interaction between chitin and polyaniline and the electronic states are similar to those of the emeraldine and protonically doped forms of polyaniline. These blend films are used for the construction of resistive based humidity sensor. A linear response of resistance with humidity is observed. It shows a small hysteresis and its response is stable even after 25 cycles of humidity exposure. Effect of electron beam irradiation on the humidity response has also been studied.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"DESIGN AND IMPLEMENTATION OF SOIL MOISTURE ANALYSER"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
RAJESHWARI GADAGI	4AL17EC076
YASHASWINI R	4AL17EC098
HARSHITHA T	4AL17EC106
RAVI TEJA G	4AL16EC101

Under the Guidance of
Mr. SUSHANTH
ANIL LOBO
Assistant Professor
Department of E&C Engineering

ALVA'S

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

2020-2021

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

*Certified that the project work entitled "***DESIGN AND IMPLEMENTATION OF SOIL MOISTURE ANALYSER***" is a bona fide work carried out by*

RAJESHWARI GADAGI	**4AL17EC096**
YASHASWINI R	**4AL17EC098**
HARSHITHA T	**4AL17EC106**
REVANTH V	**4AL16EC101**

in partial fulfillment for the award of **BACHELOR OF ENGINEERING** in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2019–2020. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mr. Sushanth Anil Lobo	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H.O.D.	PRINCIPAL
	Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225, D.K

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

The efficient irrigation management practices based on the monitoring of the moisture in the soil provide a great benefit for the appropriate amount of water applied in the fields. In recent years, the aging of agricultural workers has progressed rapidly, successor problem is becoming more serious. Under such circumstances are coming out also new farmers that will beginner to agriculture. However, the establishment of farming technology has become a major management challenge for new farmers. In this study, we focused on the fact that to compensate for the water management is a part of the management challenges of the new farmers (establishment of farming technology), to build a soil moisture measurement system due to moisture sensor. The measurement of soil moisture is the basis for the refinement of agriculture to implement water-saving irrigation. A new soil moisture sensor was designed based on its theoretical basis and analysis of the dielectric constant characteristics of soil.

This project proposes design and development of a soil moisture sensor and a response monitoring system. The probes used in this sensor are made of nickel which is an anti- corrosive and robust material for use in agricultural related applications. The response monitoring system measure the moisture of the soil, compare it with the desired values given by the user and generate alert if soil moisture goes below desired value. It helps in problems related to growing of crops in which irrigation is required at irregular interval. It is also helpful in monitoring of soil moisture in golf fields

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590010

Project Report on

"ECG SIGNAL ACQUISITION AND ECG DATA TRANSMISSION"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Divyashri Bahubali	**4AL17EC031**
Kavya M M	**4AL17EC040**
Akshata Madiwalar	**4AL17EC046**
Mounitha D M	**4AL17EC055**

Under the Guidance of
Mr. Parveez Shariff
Sr. Assistant professor
Department of E&C Engineering

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MOODBIDRI – 574 225.

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(A Unit of Alva's Education Foundation® , Moodbidri)

"Shobhavana ", Mijar, Moodbidri – 574 225, D.K.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

Certificate

This is to certify that following students

Divyashri Bahubali	**4AL17EC031**
Kavya M M	**4AL17EC040**
Akshata Madiwalar	**4AL17EC046**
Mounitha D M	**4AL17EC055**

has submitted Project Report on **"ECG SIGNAL ACQUISITION AND ECG DATA TRANSMISSION"** for VIII Semester B.E. in Electronics & Communication Engineering during the academic year 2020-21. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Project Guide	Project Coordinator	HOD
Mr. Parveez Shariff	**Mr. Sathosha S**	**Dr. D V Manjunatha.**

H.O.D.
Dept. of Electronics & Communication
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225

EXTERNAL VIVA

Name of Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

Heart related disorders are the most common health condition that can influence various aspects of life. Heart rate monitoring play a vital role to predict the health condition. Telehealth is the delivery, through electronic information and telecommunication technologies, of health-related resources and information. One of the most emerging trends in day-to-day life is the telemedicine system. This telemedicine system is evolving as a result of reducing the overall cost of the patient, in particular for disadvantaged patients and border area patients, by reducing travel allowances, hotel expenses and the sum to be charged by specialists for some complicated illnesses. Patients do not need to consult with physicians with the use of telemedicine services, and patients may be able to obtain successful care from their own locations or from local hospitals.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"DESIGN AND IMPLEMENTATION OF ANYTIME MEDICINE VENDING MACHINE"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
Channa Basava	4AL17EC020
Darshan H B	4AL17EC023
Harsha P	4AL17EC034
Manjunatha H K	4AL17EC050

Under the Guidance of

Mr. Sudhakara H M

Senior Asst. Professor

Department of E&C Engineering

ALVA'S

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MOODBIDRI – 574 225.

2020-2021

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MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

*Certified that the project work entitled "***ANYTIME MEDICINE VENDING MACHINE***" is a bona fide work carried out by*

Channa Basava	**4AL17EC020**
Darshan H B	**4AL17EC023**
Harsha P	**4AL17EC034**
Manjunatha H K	**4AL17EC050**

in partial fulfillment for the award of **BACHELOR** OF ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mr. Sudhakara H M	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H.O.D. Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	PRINCIPAL Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225, D.K

EXTERNAL VIVA

Name of the Examiners	Signature with date
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.....	.....

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi –590010

PROJECTREPORTON

DESIGN AND IMPLEMENTATION OF SMART ENERGY MONITORING SYSTEM USING IOT

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
AJITHA	4AL17EC004
BRUNDA P D	4AL17EC013
JYOTI DONUR	4AL17EC037
NAVYA	4AL17EC060

Under the Guidance of
Mr. SACHIN K
Assistant Professor
Department of E&C Engineering

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MOODBIDRI–574225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled **DESIGN AND IMPLEMENTATION OF SMART ENERGY MONITORING SYSTEM USING IOT** *is a bona fide work carried out by*

AJITHA	**4AL17EC004**
BRUNDA P D	**4AL17EC013**
JYOTI DONUR	**4AL17EC037**
NAVYA	**4AL17EC060**

in partial fulfillment for the award of BACHELOR OF ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the HOD**	**Signature of the Principal**
Mr. Sachin K	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H.O.D. Dept. of Electronics & Communication Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225	PRINCIPAL Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225, D.K

EXTERNALVIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

Electricity plays a cardinal role in day to day life. The electrical energy consumption in India is the third biggest after China and USA with 5.5% global share in 2016. The per person energy use rate in India is closer to 0.7 KW. India's share with global energy demand will rise to 9% by 2035. In spite of numerous endeavors, Energy emergency is the current day issue and it is deteriorating step by step. To conquer the present circumstance individuals are finding different energy proficient assets. Among them, power is the primary concern which should be observed and controlled. The foremost objective of this project is to create awareness about energy consumption and efficient use of home appliances for energy savings. Due to manual work, our existing electricity billing system has major drawbacks. The system gives the information on meter reading, and the alert systems for producing a Short Message Service (SMS) when energy consumption exceeds beyond the specified limit. The idea is being implemented to reduce the human dependency to collect the monthly reading and minimize the technical problems regarding billing process. This project extends the design and implementation of an energy monitoring system with the pre-intimation of power agenda using ESP-32 and a Global System for Mobile Communication (GSM) module.

Awareness of electricity consumption in the home or building is a first step towards saving power. The combination of sensors and GSM technologies for monitoring and controlling power consumption in real time is a powerful way for reducing power usage. With effective management about power consumption and control of household appliances, users can be motivated and encouraged to change their behaviours on energy use such as turning off lights or reducing heat. These small changes in behaviours can lead to significant energy savings. The proposed system can monitor and measure electricity usage in real-time. With the proposed system, users can automatically, manually, and remotely control real-time electricity usage. Thus, the real-time monitoring of the electrical appliances can be viewed through LCD display and SMS alert. This system is easy to design and consume less power, and provides at low cost.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"DEVELOPMENT OF PROTOTYPE HEART PULSE RATE MONITORING SYSTEM"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
BINDUSHRI	4AL17EC011
CHANDANA G S	4AL17EC018
DHANYA SHETTY	4AL17EC026
HEMALATHA SANIL	4AL17EC035

Under the Guidance of
Mr. YUVARAJ T
Assistant Professor
Department of E&C Engineering

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ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY
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MOODBIDRI – 574 225

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled "**DEVELOPMENT OF PROTOTYPE HEART PULSE RATE MONITORING SYSTEM**" *is a bona fide work carried out by*

BINDUSHRI	**4AL17EC011**
CHANDANA G S	**4AL17EC018**
DHANYA SHETTY	**4AL17EC026**
HEMALATHA SANIL	**4AL17EC035**

in partial fulfillment for the award of **BACHELOR OF ENGINEERING** in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mr. Yuvaraj T	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H.O.D. Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	PRINCIPAL Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225, D.K

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

Heart rate measurement is a basic and essential for daily health monitoring. A heart rate monitoring system is a personal monitoring device that allows one to measure heart rate in real-time. If someone wants to record the data or use it to trigger events, there is a need to turn that mechanical pulsing action into an electrical signal and this can be done only through heart rate measuring system. The pulse rate helps to find out if the heart is pumping enough blood to the body and also helps to find the cause of various symptoms such as an irregular or rapid heartbeat, dizziness, fainting, chest pain or difficulty in breathing. More than million people are at high risk of having heart related diseases. It would be helpful if there was a way for these people to check the heart rate by sitting at home.

The project proposes a design model of MEMS based piezoresistive pressure sensor realizing a portable, comfortable and low cost solution for long-term domestic heart rate monitoring. MEMS based piezoresistive pressure sensor will be the most efficient sensor in measuring the heart rate as they possess high linearity and stability. MEMS sensors have the advantage of very small size, this means they can respond rapidly to small changes in pressure. Piezoresistive pressure sensors were some of the first MEMS devices to be commercialized. Applied pressure range is varied from 100 to 1000 kPa. To gain the optimum output, different combination of material for diaphragm and piezoresistor have been studied and corresponding displacement change, shear stress distribution and output voltage have been shown. The developed project is of low cost, portable and easy to use.

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"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"DESIGN AND IMPLEMENTATION OF PIEZOELECTRIC NANO MATERIALS FOR ENERGY HARVESTING"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
Kishore N	4AL17EC042
M Manjunatha	4AL17EC047
Mohanababu D G	4AL17EC053
Nagaganesh N	4AL17EC057

Under the Guidance of
Dr. Mrinmoy Misra

Senior Assistant Professor

Department of E&C Engineering

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled "DESIGN AND IMPLEMENTATION OF PIEZOELECTRIC NANO MATERIALS FOR ENERGY HARVESTING" *is a bona fide work carried out by*

Kishore N	**4AL17EC042**
M Manjunatha	**4AL17EC047**
Mohanababu D G	**4AL17EC053**
Nagaganesh N	**4AL17EC057**

in partial fulfillment for the award of **BACHELOR** OF ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Dr. Mrinmoy Misra	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H. O. D.	PRINCIPAL
	Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225, D.K

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

Energy reaping is a promising strategy that can assist with addressing the worldwide energy challenge without exhausting normal assets. As one of the efficient power energy arrangements, energy collecting can decrease ozone depleting substance emanation produced with conventional fuel sources. Piezoelectric, thermoelectric, electromagnetic, and photovoltaic strategies are a few instances of energy gathering innovations that can be utilized to gather energy from the encompassing climate to create power these days. These advances work in various standards and accordingly have diverse application necessities and energy transformation efficiencies.

In this proposed project is to overcome the scarcity of the electric energy, through naturally occurring piezo electric materials (Quartz, Barium Titanium, zinc, sodium bismuth titanate, lead zirconium titanate)etc, especially in our project we considered the zinc oxide (ZnO) as piezoelectric material. By this we successfully fabricated and tested the piezoelectric nano generator with the output voltage range of ~30mV, at room temperature.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"SUBSTITUTE FOR AN AMPUTATED HAND USING A BIONIC ARM"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
NISHANTHA V R	4AL17EC063
YASHWITHA C N	4AL17EC099
BINDU N R	4AL17EC101
SACHIN KRISHNA MOGER	4AL17EC103

Under the Guidance of
Mrs. NISHMA
Assistant Professor
Department of E&C Engineering

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

*Certified that the project work entitled "***SUBSTITUTE FOR AN AMPUTATED HAND USING A BIONIC ARM***" is a bonafide work carried out by*

NISHANTHA V R	**4AL17EC063**
YASHWITHA C N	**4AL17EC099**
BINDU N R	**4AL16EC101**
SACHIN KRISHNA MOGER	**4AL17EC103**

in partial fulfillment for the award of BACHELOR OF ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020-2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mrs. Nishma	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H.O.D Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	PRINCIPAL Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225, D.K

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.	.....
2.	.....

ABSTRACT

For people who are physically challenged with the upper limb, performing daily activities, even simple basic tasks can be impossible or very distressing. People who have lost their arm frequently face traumatizing situations and often face difficulties even while walking due to body imbalance. Even though there are many bionic arms available these days, people often discard the idea of buying and using them due to their very high cost. People who earn average wage can't afford the bionic arms due to their complex design. They also give up on the idea of buying these prosthetic devices due to their complications in usage. Many arms require the users to know many complex steps in order to mount these arms onto their body. Due to many reasons, prosthetic arms are not as famous even though they are very helpful.

This project proposes a system that will help the physically challenged to use the bionic arm which is affordable, simple to use and is not a burden in terms of aesthetics. Using simple design tweaks, the number of components used in the bionic arm design can be significantly reduced. This reduction in the number of components drastically brings down the price of the prosthetic arm which is very affordable to a person who is earning an average wage. The reduction of components also reduces the delay in the bio – feedback system of the bionic arm thus giving a natural feel while using the prosthetic device. The device is also 3D printed thus increasing the adaptability and weighs less thus increasing the portability of the device. A portable power supply is also used thus increasing the portability of the prosthetic arm furthermore.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"DESIGN AND IMPLEMENTATION OF ARECANUT TREE CLIMBING ROBOT"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING

IN

ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Mirza Sibgathulla	**4AL16EC037**
Poojary Sushmita	**4AL16EC046**
Rakshith B	**4AL16EC409**
Poojary Sushant	**4AL18EC400**

Under the Guidance of

Mrs. NISHMA

Assistant Professor

Department of E&C Engineering

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MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled **"Design and Implementation of Arecanut Tree Climbing Robot"** *is a bona fide work carried out by*

Mirza Sibgathulla	**4AL16EC037**
Poojary Sushmita	**4AL16EC046**
Rakshith B	**4AL16EC409**
Poojary Sushant	**4AL18EC400**

in partial fulfillment for the award of BACHELOR OF ENGINEERING in ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	Signature of the H.O. D	Signature of the Principal
Mrs. Nishma	Dr. D.V.Manjunatha	Dr. Peter Fernandes

H. O. D.
Dept. of Electronics & Communication
Alva's Institute of Engg. & Technology

Alva's Institute of Engg. & Technology,
Mijar, MOODBIDRI - 574 225, D.K.

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

The people in rural areas of south India like Karnataka and Kerala mainly depend on agriculture for their livelihood. The main crops grown are Areca nut and coconut. For spraying and applying insecticides on the crown and also for harvesting, skilled laborer's have to climb manually up the tree. Such a process looks easy, in reality it is a laborious and dangerous task. Arecanut trees attain a height of about 60-70 feet.

It is mandatory to climb the trees a minimum of five times a year for a successful harvest - twice for the preventive spray against fungal disease, and thrice to harvest the arecanut. Only skilled labors can carry out these farming operations. They have to climb the trees using muscle power. In an acre that has 550 trees, a laborer has to climb a minimum of 100 to 150 trees. As this involves really hard, physical exertion, younger generations of laborer's are losing interest, with potentially harsh implications for arecanut cultivation. The spraying is done in monsoon, while harvest time is typically in summer. It requires skill to climb an arecanut tree. Skilled areca nut tree climbers have become scarce and farmers are finding it difficult to spray the insecticides. This project aims to overcome these deficiencies by developing a smart multitalented robot for arecanut farming.

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"Jnana Sangama" Belagavi – 590010

PROJECT REPORT ON

DESIGN AND IMPLEMENTATION OF FUEL ACCURACY MEASUREMENT AND THEFT DETECTION IN VEHICLES

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Madhu B Gurav	**4AL15EC043**
Vijay Chandrahas Hadpad	**4AL15EC100**
Shravan V Acharya	**4AL16EC073**

Under the Guidance of
Mrs. BHARGAVI K V
Assistant professor
Department of E&C Engineering

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY
MOODBIDRI – 574 225.

2020-2021

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(A Unit of Alva's Education Foundation® ,Moodbidri)

"Shobhavana ", Mijar, Moodbidri – 574 225, D.K.

DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE

This is to certify that following students

Madhu B Gurav	**4AL15EC043**
Vijay Chandrahas Hadpad	**4AL15EC100**
Shravan V Acharya	**4AL16EC073**

have submitted Project report on **Design and Implementation of fuel accuracy measurement and theft detection in vehicles** for VIII Semester B.E. in Electronics & Communication Engineering during the academic year 2020-21. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	Signature of the H.O.D	Signature of the Principal
Mrs. Bhargavi K V	Dr. D.V.Manjunatha	Dr. Peter Fernandes

H. O. D.
Dept. Of Electronics & Communication
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225

PRINCIPAL
Alva's Institute of Engg. & Technology
Mijar, MOODBIDRI - 574 225, D.K.

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

Fuel is one of the most overpriced commodite world-wide, and this has led to a manifold increase in fuel theft globally. Automotive industry has increased exponentially in Recent years, and the number of vehicle drivers has increased in the street as well, that leads to the increasing demand for using fuel stations. The fluctuating price of petrol has also increased in the fuel theft cases.The main concept of the project is to detect the quantity or amount of fuel filled from petrol bunk to vehicle tank is proper or not. If there is an inappropriate fuel filled by fuel tube nozzle to vehicle there will be indication shown to the user of the vehicle. Although noncontact methods are more complex than contact methods, there are lots of sensors available for the fuel measurement. In this system we are detecting the fuel theft detection using the fuel sensor, Microcontroller, and the LCD display. To detect the fuel theft problem and the sudden decrease in the fuel level in the vehicles. There are many types of the sensors and we haveused the fuel sensors .In which it is very accurate when compared to the other sensors. LCD display is used in this system to display quantity in the form of the digital signal of the volume of the fuel level in the vehicles. Buzzer which sends the message to the owner of the vehicle when there is any fuel theft in the vehicle. So that the owner of the vehicle can be alerted from the fuel theft problem.

This paper presents the design, implementation and characterization of a hardware platform for Fuel level indication System for vehicles. The primary design goal is to devise a system capable of monitoring the fuel level in real time.to calculate the quantity of fuel filling in the tank and at petrol-stations. This system is based on hardware as well as software. The Hardware part consists of fuel level circuits, on- board Arduino,GSM modules,Liquid Crystal Display (LCD) and Flow Level Sensor. While the software part consists of Arduino IDE. This system measures fuel volume and sends measured volume to the owner's mobile through the GSM network. It also provides a technique for detecting theft or fraud incidents in case of fuel fill in the tank is less than the required fuel to be filled or fuel theft from vehicle. This system allows monitoring of fuel level, having a reduced cost due to affordable and easy-to-acquire electronic components.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON
"DESIGN AND IMPLEMENTATION OF REMOTE MONITORING SYSTEM FOR SOLAR MOTORS AND PUMPS"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
PADMINI M	4AL17EC066
PAVITHRAN S	4AL17EC068
PRASHANTHA NAIK	4AL17EC074
SHILPA C	4AL17EC086

Under the Guidance of
Mrs.BHARGAVI K V
Assistant Professor
Department of E&C Engineering

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY
MOODBIDRI – 574 225.

2020-2021

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled "**DESIGN AND IMPLEMENTATION OF REMOTE MONITORING SYSTEM FOR SOLAR MOTORS AND PUMPS**" *is a bona fide work carried out by*

PADMINI M	**4AL17EC066**
PAVITHRAN S	**4AL17EC068**
PRASHANTHA NAIK	**4AL17EC074**
SHILPA C	**4AL17EC086**

n partial fulfillment for the award of **BACHELOR OF ENGINEERING** in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

ignature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Irs. BHARGAVI K V	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H. O. D.	PRINCIPAL
	Dept. Of Electronics & Communication	Alva's Institute of Engg. & Technology
	Alva's Institute of Engg. & Technology	Mijar, MOODBIDRI - 574 225. D.K
	Mijar, MOODBIDRI - 574 225	

EXTERNAL VIVA

ame of the Examiners	Signature with date
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ABSTRACT

Automation technology has got vital development. The cropland sluice in our motherland still embraces the large physical working manner which will result in wasting water resources and human resources.

Monitoring systems of remote locations have an excessive opportunity today. Presently many remote monitoring systems are designed and developed as per necessities or chucks and application areas. Currently, constraints of remote monitoring systems growing promptly. Open CPU is a prodigious embedded solution for the machine to machine (M2M) technology. The intention of developing a remote monitoring system is mainly focused on the machinery present in construction fields. The remote monitoring system is developed to measure the parameters and monitor the machinery present at the construction field. Construction works are dangerous work because fields may have heavy equipment and machinery. Construction work has many hazardous tasks such as working with heavy equipment and machinery, power tools, dusty environment. This machinery requires high power or electricity to work. The remote monitoring system avoids coincidences that may happen on the construction site. The remote monitoring system is installed once at machinery and the required information of the machine is monitored over the server using GSM technology. It may avoid unexpected accidents or damages happen in the future.

The designed remote monitoring system allows efficient, reliable, and more precise monitoring and measurement of parameters of equipment present at remote places. The system is designed using Embedded C programming language. RMS takes the information through a sensor via ADC such as Voltage, RPM, temperature, and pressure of equipment and sends it to the server. GSM/GPRS technology is used to transmit these parameters over the server.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"Design of a Flight Control Board for a Quadcopter"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
PADMASHREE B S	4AL17EC065
PRAGATI M KUNDALKAR	4AL17EC072
RASHMITHA	4AL17EC077
VIDUL SAMBHAJI CHAVAN	4AL17EC095

Under the Guidance of

Mr. PARVEEZ SHARIFF B G
Sr. Assistant Professor
Department of E&C Engineering

ALVA'S

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY
MOODBIDRI – 574 225.

2020-2021

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MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

)EPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

'ertified that the project work entitled "**DESIGN OF A FLIGHT CONTROL BOARD FOR A)UADCOPTER**" *is a bona fide work carried out by*

PADMASHREE B S	**4AL17EC065**
PRAGATI M KUNDALKAR	**4AL17EC072**
RASHMITHA	**4AL17EC077**
VIDUL SAMBHAJI CHAVAN	**4AL17EC095**

n partial fulfillment for the award of BACHELOR OF ENGINEERING in **ELECTRONICS & :OMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL JNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all orrections/suggestions indicated for Internal Assessment have been incorporated in the report leposited in the departmental library. The project report has been approved as it satisfies the academic equirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mr. Parveez Shariff B G	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H. O. D.	**PRINCIPAL**
	Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

A drone or Unmanned Aerial Vehicle (UAV) is an aerial vehicle that does not require an onboard pilot to perform the flight. The UAVs are controlled by pilots through a controller, but self-controlling systems are becoming more common Drones are mostly piloted by humans using a remote control known as a Radio Controller (RC). On the other side, the device integrator will operate it autonomously. UAVs were originally designed for military purposes, but their use in civilian applications such as firefighting missions and civilian defence, such as surveillance of a large facility's pipeline, is gradually increasing. Finally, UAVs can be used in search and rescue operations, assisting in the recovery of missing or stranded people in inaccessible locations. One such classification of UAV is Quadcopter. It is a multirotor air vehicle with four rotors. Unlike conventional helicopters, which use a special mechanism to adjust the pitch of their propellers, quadrotors use fixed-pitch propellers like airplanes. It consists of only four propellers of equal diameter that raise and propel it forward. These four props are symmetrically mounted on a cross shaped skeleton, with the payload in the middle of the frame. Those props are rotated every two rotations and vice versa, resulting in zero torque applied to the drone.

In the proposed system, the flight controller is designed using aurdino uno and MPU6050. Software, peripherals, and the drive mechanism are the three basic parts of a flight controller. The data from the sensors is processed by the microprocessor and produces an output signal using the motors control algorithms. The Electronic Speed Controller (ESC) sends the output signal to the motors.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"DESIGN AND IMPLEMENTATION OF LANDSLIDE EARLY WARNING AND MONITORING SYSTEM"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
ROHAN SHETTY	4AL17EC079
ROSHNI A B	4AL17EC080
VARUN G SHETTY	4AL17EC092
YAMUNASHREE N	4AL17EC097

Under the Guidance of

Mr. SANTHOSH S

Assistant Professor

Department of E&C Engineering

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

2020-2021

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

*Certified that the project work entitled "***DESIGN AND IMPLEMENTATION OF LANDSLIDE EARLY WARNING AND MONITORING SYSTEM***" is a bona fide work carried out by*

ROHAN SHETTY	**4AL17EC079**
ROSHNI A B	**4AL17EC080**
VARUN G SHETTY	**4AL17EC092**
YAMUNASHREE N	**4AL17EC097**

in partial fulfillment for the award of **BACHELOR OF ENGINEERING** in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mr. Santhosh S	**Dr. D V Manjunatha** H. O. D. Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	**Dr. Peter Fernandes** PRINCIPAL Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225, D.K

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

Environmental disasters are largely unpredictable and occur within very short span of time, one of which is landslides. A landslide generally refers to the downhill movement of rock, soil, or debris. It is a high-risk phenomenon that often occurs around the globe either at small or big scale. It has been known as a natural phenomenon, but nowadays, its occurrence is more often due to human activities. Impact of landslides is a threat to human life and could destroy any existing structure or property in its path. Various factors could contribute to the occurrence of landslides, and rainfall is an inevitable triggering factor

This natural phenomenon cannot be abolished, but one can reduce the losses by an early warning system using wireless sensor networks. Early warning systems depend on a sensor node used to read different properties of slope and soil condition with particular parameters. The parameters that are received are used for the detection of downhill movement of soil, debris or rocks. However, one should replace the entire system due to the damage to the sensor node when a landslide occurs. Sensor node has IMU sensors to monitor the movement of particles and microprocessors, which are economical to manufacture and could be installed in a small space.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590010

Project Report on

"DESIGN AND IMPLEMENTATION OF AUTOMATED HYDROPONIC SYSTEM"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

P V Sai Suraksha	**4AL17EC064**
Persis P	**4AL17EC069**
Pooja K S	**4AL17EC070**
S Nikhil Tejaswi	**4AL17EC104**

Under the Guidance of
Mrs. Vijetha T S
Assistant professor
Department of E&C Engineering

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ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY
MOODBIDRI – 574 225.

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MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

*Certified that the project work entitled "***DESIGN AND IMPLEMENTATION OF AUTOMATED HYDROPONIC SYSTEM***" is a bona fide work carried out by*

P V Sai Suraksha	**4AL17EC064**
Persis P	**4AL17EC069**
Pooja K S	**4AL17EC070**
S Nikhil Tejaswi	**4AL17EC104**

in partial fulfillment for the award of **BACHELOR** OF ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mrs. Vijetha T S.	**Dr. D V Manjunatha.**	**Dr. Peter Fernandes.**
	H.O.D. Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	PRINCIPAL Alva's Institute of Engg. & Technology, Mijar, MOODBIDRI - 574 225, D.K

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

Traditional farming requires large amount of water for irrigation, and the pesticides used are polluting the soil and water bodies too. In addition to this, the rapid industrialization and urbanization have severely affected the resources like land, water and soil fertility. Climate change has had a disastrous impact on the growth of plants and vegetables. This can be controlled by an alternative method called hydroponics. Hydroponics is the method of growing plants in a soilless medium.

This method is preferable as the plant production and yield is very high, and the plants need to be sparingly watered. The growing roots get the nutrients readily as they are submerged in a nutrient-rich pool. The plants grow comparatively faster. The chances of being infected by pests and bacteria from the soil can be eliminated. The human intervention can be kept at minimum by automating the system, by the help of microcontrollers and sensors. The monitoring and control of the system can be done using Internet of things (IOT). Sensors like temperature, pressure, humidity, electrical conductivity can be used in order to grow the plants in a controlled environment.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010

PROJECT REPORT ON

"DESIGN AND DEVELOPMENT OF SVM MODEL TO DETECT THE EFFECT OF DIABETES"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name	USN
DEEKSHA J ACHARYA	4AL17EC024
NIHARIKA NARAYANA L	4AL17EC062
SAHANA S R	4AL17EC083
SUSHMITHA	4AL17EC102

Under the Guidance of
Mrs. KUMARI SHRUTHI
Assistant Professor
Department of E&C Engineering

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MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled "**DESIGN AND DEVELOPMENT OF SVM MODEL TO DETECT THE EFFECT OF DIABETES**" *is a bona fide work carried out by*

DEEKSHA J ACHARYA	**4AL17EC024**
NIHARIKA NARAYANA L	**4AL17EC062**
SAHANA S R	**4AL17EC083**
SUSHMITHA	**4AL17EC102**

in partial fulfillment for the award of **BACHELOR OF ENGINEERING** in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all corrections/suggestions indicated for Internal Assessment have been incorporated in the report deposited in the departmental library. The project report has been approved as it satisfies the academic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Mrs. Kumari Shruthi	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
	H. O. D. Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	PRINCIPAL Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225, D.K.

EXTERNAL VIVA

Name of the Examiners	Signature with date
1.....	.....
2.....	.....

ABSTRACT

There are many people who are suffering from blindness because of diabetic retinopathy globally, an estimation shows about 40 to 45 million people are totally blind,135 million have low vision and 314 million have some kind of visual impairment. The incidence and demographics of blindness vary greatly in different parts of the world. In most industrialized countries, approximately 0.4% of the population is blind while in developing countries it rises to 1%. It is estimated by the World Health Organization(WHO) that 87% of the world's blind live in developing countries.

Diabetes is known as the mother of all diseases and it directly affects the retina which is the main part of the eye so it is called as diabetic retinopathy. Diabetic retinopathy is the vision threatening complications, about 25,000 people are blind in US due to diabetic retinopathy. It is estimated that diabetic retinopathy is responsible for 5% of world's blindness cases. Early diagnosis of diabetic retinopathy and providing proper treatment can prevent blindness. The main sign of diabetic retinopathy are exudates. If exudates are detected, then diabetic retinopathy can be detected at an early stage.

The project describes about the decision tree algorithm where RGB image is taken as an input. The green component is extracted from the RGB image. In the green component of the image, median filter of 3×3 mask size is applied. After masking pre-processed image is obtained. Exudates and micro aneurysms are detected and using this data they are classified into normal, mild, moderate and severe DR. Then the noise is removed by erosion and dilation and then the exudates are detected.

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590010

PROJECT REPORT ON

"DESIGN AND IMPLEMENTATION OF IMAGE PROCESSING BASED MILITARY SURVEILLANCE"

Submitted in partial fulfillment of the requirements for the award of degree

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

AKASH M	**4AL17EC105**
SANKETHA S ACHARYA	**4AL17EC084**
SATHYA B R	**4AL16EC065**

Under the Guidance of
Mr. YUVARAJ T
Asst. Professor
Department of E&C Engineering

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ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY
MOODBIDRI – 574 225.

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MOODBIDRI – 574 225

(Affiliated to VTU, **BELAGAVI**)

DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

*Certified that the project work entitled "***Design and Implementation of Image processing based military surveillance***" is a bona fide work carried out by*

Akash M	**4AL17EC105**
Sanketha S Acharya	**4AL17EC084**
Sathya B R	**4AL16EC065**

n partial fulfillment for the award of **BACHELOR** OF ENGINEERING in **ELECTRONICS & COMMUNICATION ENGINEERING of** the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2020–2021. It is certified that all orrections/suggestions indicated for Internal Assessment have been incorporated in the report eposited in the departmental library. The project report has been approved as it satisfies the cademic requirements in respect of Project work prescribed for the Bachelor of Engineering Degree.

Signature of the Guide	**Signature of the H.O.D**	**Signature of the Principal**
Dr. D V Manjunatha	**Dr. D V Manjunatha**	**Dr. Peter Fernandes**
YUVRAJ.	H.O.D.	PRINCIPAL
	Dept. Of Electronics & Communication Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225	Alva's Institute of Engg. & Technology Mijar, MOODBIDRI - 574 225, D.K

EXTERNAL VIVA

Name of the Examiners	Signature with date
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.....	.....

ABSTRACT

Face recognition has a wide range of possible applications from person identification and surveillance to electronic marketing and advertising for selected customers. In facial recognition, there are different steps such as preprocessing, feature extraction and classification where feature extraction and classification are used to obtain maximum accuracy. In this research paper, different feature extraction techniques such as ASM, AAM, Gabor features, Template based, and several are critically reviewed. Apart from these, the different types of neural classification networks such as convolutional, back propagation, radial basis function etc. in the domain of facial recognition are explored. The methods and algorithms developed in the current literature are studied and it is revealed that all the techniques are unique and have optimal performance. This research further makes a comparative analysis of these techniques based on their advantages and limitations.

Authenticating user is the important aspect in ATM security. Password is most important thing to provide security in any system password having two way first is text way and second is graphical way. We proposing both security feature text base word and graphical password graphical password include face recognition for detect the face but it is second process .The first process is text password which include random number. We design this system to minimize the shoulder surfing attack with the help of random keypad and face recognition method. It works as ATM system this type of keypad more powerful as compare to normal keypad.

एक कदम स्वच्छता की ओर

ಭಾರತ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್
भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS

भारत इलेक्ट्रॉनिक्स लिमिटेड
(भारत सरकार का उद्यम, रक्षा मंत्रालय)
जालहल्ली पोस्ट, बेंगलूरु - 560 013, भारत
BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, **BENGALURU - 560 013, India**

फोन / Phone :
फैक्स / Fax :
ईमेल / E-mail :

सं/No: 6050/HR/PD&IC/PT-039/2019-20
दिनांक/Date: 29.07.2019

(उत्पाद विकास एवं नवोन्मेष केंद्र)
PRODUCT DEVELOPMENT & INNOVATION CENTRE

प्रमाण-पत्र - CERTIFICATE

This is to certify that **Ms. DEEKSHA J ACHARYA** student of **Alva's Institute of Engineering & Technology** has undergone Internship in BEL from 10.07.2019 to 29.07.2019 at "PD&IC".

He/She was regular and punctual and his/her conduct was satisfactory during period.

SR. ASST. HR OFFICER
(HR/PD&IC)

थिम्मैया क म / THIMMAIAH K M
206146
वरिष्ठ सहायक मा सं अधिकारी
SR. ASST. H R OFFICER
उ वि एवं न कें / PD & IC

पंजीकृत एवं कार्पोरेट ऑफिस : नागवारा, आउटर रिंग रोड, बेंगलूरु - 560 045, भारत
Reg. & Corporate Office : Nagavara, Outer Ring Road, Bengaluru - 560 045, India
सी आई एन / CIN : L32309KA1954GOI000787
आई एस ओ / ISO 9001 and 14001 प्रमाणित कंपनी / Certified Company

भारत इलेक्ट्रॉनिक्स लिमिटेड
(भारत सरकार का उद्यम, रक्षा मंत्रालय)
जालहल्ली पोस्ट, बेंगलुरु - 560 013, भारत
BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, **BENGALURU - 560 013**, India

फोन / Phone :
फैक्स / Fax :
ईमेल / E-mail :

No: 383/HR/CLD/479/2019-20
Date: 03-Aug-2019

CENTRE FOR LEARNING AND DEVELOPMENT

CERTIFICATE

This is to certify that ***Mr. SWASTIK R GOWDA*** *student of* ***ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, MANGALORE*** *has undergone Internship in BEL from 15-07-2019 to 03-08-2019 and has undergone Orientation in "EW&LA" SBU and acquired knowledge in "LCA TESTING (DFCC)."*

He / She was regular and punctual in his / her attendance and his/her conduct was satisfactory during the period.

PROJECT GUIDE

मुरलीधरन. के / MURALIDHARAN. K
BC E 206746
वरिष्ठ उ म प्र / SR. DY. GEN. MANAGER
एल सी ए / ईडब्ल्यू उ ए
LCA TESTING / EW & A

PROJECT CO-ORDINATOR (CLD)

कलैवाणी. पी / KALAIVANI. P
BC E 210455
उ म प्र. सी एल डी / DGM, CLD

9914 041 002 19

भारत इलेक्ट्रॉनिक्स लिमिटेड
(भारत सरकार का उद्यम, रक्षा मंत्रालय)
जालहल्ली पोस्ट, बेंगलूरु - 560 013, भारत
BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, **BENGALURU - 560 013**, India

फोन / Phone :
फैक्स / Fax :
ईमेल / E-mail :

No: 383/HR/CLD/432/2019-20
Date: 24/Jul/2019

CENTRE FOR LEARNING AND DEVELOPMENT

CERTIFICATE

This is to certify that Mr. VARUN G SHETTY student of ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, MANGALURU has undergone Internship in BEL from 10-07-2019 to 24-07-2019 and has undergone Orientation in "MR" SBU.

He / She was regular and punctual in his / her attendance and his/her conduct was satisfactory during the period.

PROJECT GUIDE
मोहियदीन .एम.एस / MOHIYADEEN M.S
208924
अप्र महा प्रबंधक / Addl. Gen. Manager
टी ए ई - मिलिटरी रेडार / D&F - Military Radar

PROJECT CO-ORDINATOR (CLD)
NANJUNDA SWAMY
Dy. MANAGER (HR / CLD)
BHARAT ELECTRONICS LIMITED
JALAHALLI POST, BENGALURU-560 013

पंजीकृत एवं कार्पोरेट आफिस : नागावारा, आउटर रिंग रोड, बेंगलूरु - 560 045, भारत
Reg. & Corporate Office : Nagavara, Outer Ring Road, Bengaluru - 560 045, India
सी आई एन / CIN : L32309KA1954GOI000787
आई एस ओ / ISO 9001 and 14001 प्रमाणित कंपनी / Certified Company

भारत इलेक्ट्रॉनिक्स लिमिटेड
(भारत सरकार का उद्यम, रक्षा मंत्रालय)
जालहल्ली पोस्ट, बेंगलूरु - 560 013, भारत
BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, **BENGALURU - 560 013**, India

फोन / Phone :
फैक्स / Fax :
ईमेल / E-mail :

No: 383/HR/CLD/478/2019-20
Date: 03-Aug-2019

CENTRE FOR LEARNING AND DEVELOPMENT

CERTIFICATE

This is to certify that **Mr. YATHISH S RAO** *student of* **ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, MANGALORE** *has undergone Internship in BEL from 15-07-2019 to 03-08-2019 and has undergone Orientation in* **"EW&LA"** *SBU and acquired knowledge in* **"LCA TESTING (DFCC)."**

He / She was regular and punctual in his / her attendance and his/her conduct was satisfactory during the period.

PROJECT GUIDE

मुरलीधरन. के / MURALIDHARAN. K
BC E 206746
वरिष्ठ उ म प्र / SR. DY. GEN. MANAGER
एल सी ए / इंडक्यू ए ए
LCA TESTING / EW & A

PROJECT CO-ORDINATOR (CLD)

कलैवाणी पी / KALAIVANI. P
BC E 210455
डी एल डी / DGM, CLD

एक कदम स्वच्छता की ओर

भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS

भारत इलेक्ट्रॉनिक्स लिमिटेड
(भारत सरकार का उद्यम, रक्षा मंत्रालय)
जालहल्ली पोस्ट, बेंगलुरु - 560 013, भारत.
BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, **BENGALURU - 560 013**, India
फोन / Phone :
फैक्स / Fax :
ईमेल / E-mail :

No: 383/HR/CLD/433/2019-20
Date: 24/Jul/2019

CENTRE FOR LEARNING AND DEVELOPMENT

CERTIFICATE

This is to certify that Ms. SUSHMITHA student of ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, MANGALURU has undergone Internship in BEL from 10-07-2019 to 24-07-2019 and has undergone Orientation in "MR" SBU.

He / She was regular and punctual in his / her attendance and his/her conduct was satisfactory during the period.

PROJECT GUIDE
मोहियदीन .एम.एस / MOHIYADEEN M.S
208924
अपर महा प्रबंधक / Addl. Gen. Manage
डी ए ई - मिलिटरी रेडार / D&E - Military Radar

PROJECT CO-ORDINATOR (CLD)
KANJUNDA SWAMY
Dy. MANAGER (HR / CLD)
BHARAT ELECTRONICS LIMITED
JALAHALLI POST, BENGALURU-560 013

9914 041 002 19

स्वच्छ भारत
एक कदम स्वच्छता की ओर

ಭಾರತ್ ಎಲೆಕ್ಟ್ರಾನಿಕ್ಸ್
भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS

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जालहल्ली पोस्ट, बेंगलूरु - 560 013, भारत
BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, **BENGALURU - 560 013**, India
फोन / Phone :
फैक्स / Fax :
ईमेल / E-mail :

No: 383/HR/CLD/283/2019-20
Date: 08-Aug-2019

CENTRE FOR LEARNING AND DEVELOPMENT

CERTIFICATE

This is to certify that Mr. AKASH M student of ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, MOODBIDRI has undergone Internship in BEL from 15-07-2019 to 08-08-2019 and has undergone Orientation in "MIL.COM" SBU.

He / She was regular and punctual in his / her attendance and his/her conduct was satisfactory during the period.

PROJECT GUIDE
बंटुपल्लि मधुसूदन डिओ
BANTUPALLI MADHUSUDAN DEO
213440 प्रबंधक / Manager
एम सी ई / टी एस / MCE / TS

PROJECT CO-ORDINATOR (CLD)
ANJUNDA
Dy. MANAGER (CLD)
BHARAT ELECTRONICS LIMITED
JALALI POST, BEN PIN-560 013

9914 041 002 19

भारत इलेक्ट्रॉनिक्स लिमिटेड
(भारत सरकार का उद्यम, रक्षा मंत्रालय)
जालहल्ली पोस्ट, बेंगलूरु - 560 013, भारत
BHARAT ELECTRONICS LIMITED
(A Govt. of India Enterprise, Ministry of Defence)
Jalahalli Post, **BENGALURU - 560 013,** India
फोन / Phone :
फैक्स / Fax :
ईमेल / E-mail :

सं/No: 6050/HR/PD&IC/PT-038/2019-20
दिनांक/Date: 30.08.2019

(उत्पाद विकासए वं नवोन्मेष केंद्र)
PRODUCT DEVELOPMENT & INNOVATION CENTRE

प्रमाण-पत्र - CERTIFICATE

This is to certify that **MS. RACHANA C HULIKATTI** student of **ALVA'S INSTITUTE OF ENGINEERING & COLLEGE** has undergone Internship in BEL from 08.07.2019 to 07.08.2019 and has undergone Orientation in "PD&IC".

He/She was regular and punctual and his/her conduct was satisfactory during period.

SR. ASST. HR OFFICER
(HR/PD&IC)

थिमैया क मी / THIMMAIAH K M
206140
वरिष्ठ सहायक मा स अधिकारी
SR ASST. H R OFFICER
उ वि एं च के / PD & IC

स्वच्छ भारत
एक कदम स्वच्छता की ओर

भारत इलेक्ट्रॉनिक्स
BHARAT ELECTRONICS

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(भारत सरकार का उद्यम, रक्षा मंत्रालय)
जालहल्ली पोस्ट, बेंगलूरु – 560 013, भारत
BHARAT ELECTRONICS LIMITED
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Jalahalli Post, **BENGALURU - 560 013,** India
फोन / Phone :
फैक्स / Fax :
ईमेल / E-mail :

1410/CLD/HR/2019-20/27/692
20-Feb-2020

CENTRE FOR LEARNING AND DEVELOPMENT

CERTIFICATE

This is to certify that ***Ms. BHAVYA G B*** *student of* ***ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY, DAKSHINA KANNADA*** *has undergone Internship in BEL from 22-01-2020 to 20-02-2020 and has undergone Orientation in* ***"MS"*** *Department.*

He / She was regular and punctual in his / her attendance and his/her conduct was satisfactory during the period.

PROJECT GUIDE
जयकुमार के.एम. / JAIKUMAR K.M.
217888, अधिकारी (मा.सं.) Officer (HR)
एम आर एंड एम एस / MR & MS

PROJECT CO-ORDINATOR (CLD)
नंजुंड स्वामी / NANJUNDA SWAMY
उप प्रबंधक (मा. सं. / HR ऐन डी)
DEPUTY MANAGER (HR / CLD)
भारत इलेक्ट्रॉनिक्स लिमिटेड, बेंगलूरु-13
BHARAT ELECTRONICS LTD. BLORE-13

DLithe

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Dlithe Consultancy Services Pvt. Ltd.

CIN : U72900KA2019PTC121035

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Miss. AKSHATHA RANGANATH** student of Alva's Institute of Engineering and Technology, Moodbidri **USN 4AL17EC007** has successfully undergone Internship at Dlithe Consultancy Services Pvt. Ltd. from 09th January to 13th March 2020

The Internship was aimed at learning and implementation of machine learning techniques using Python programming. As part of agile implementation, proof of concepts was developed and the results are stored in Github.

During this period, we found **AKSHATHA RANGANATH** to be very sincere and hardworking.

We wish you all the best for future endeavors!

Regards,

DLITHE CONSULTANCY SERVICES PVT. LTD. Bengaluru

For Dlithe Consultancy Services Pvt Ltd
Authorized Signatory

Be Agile..Be in Demand

Dlithe Consultancy Services Pvt. Ltd.
CIN : U72900KA2019PTC121035

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr. CHETHAN KUMAR** student of Alva's Institute of Engineering and Technology, Moodbidri **USN 4AL17EC021** has successfully undergone Internship at Dlithe Consultancy Services Pvt. Ltd. from 09th January to 13th March 2020

The Internship was aimed at learning and implementation of machine learning techniques using Python programming. As part of agile implementation, proof of concepts was developed and the results are stored in Github.

During this period, we found **CHETHAN KUMAR** to be very sincere and hardworking.

We wish you all the best for future endeavors!

Regards,

DLITHE CONSULTANCY SERVICES PVT. LTD. * Bengaluru

For Dlithe Consultancy Services Pvt Ltd
Authorized Signatory

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Dlithe Consultancy Services Pvt. Ltd.
CIN U72900KA2019PTC121035

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Miss. DHAVALA** student of Alva's Institute of Engineering and Technology, Moodbidri **USN 4AL17EC027** has successfully undergone Internship at Dlithe Consultancy Services Pvt. Ltd. from 09th January to 13th March 2020

The Internship was aimed at learning and implementation of machine learning techniques using Python programming. As part of agile implementation, proof of concepts was developed and the results are stored in Github.

During this period, we found **DHAVALA** to be very sincere and hardworking.

We wish you all the best for future endeavors!

Regards,

For Dlithe Consultancy Services Pvt Ltd
Authorized Signatory

AIET Envision Lab
Rm.No - 315, 3rd Floor,
Alva's Institute of Engineering and
Technology, Mijar, Moodbidri,
Dakshina Kannada
Karnataka - 574225

AIET ENVISION LAB

Internship Certificate

This is to certify that *Ms. Bhavala*
has successfully completed the internship and training
on ***Embedded Systems and Sensor Interfacing*** with a
working prototype.

The internship was carried under Envision Lab at AIET campus
from **10th July** to **25th July 2019.**

Dr.Peter Fernandes
Principal
Alva's Institute of Engineering and Technology, Mijar,
Moodbidri

Mr. Parveez Shariff B G
Sr Assistant Professor &
Faculty Incharge for
AIET Envision Lab

Mr. Himanshu Rangadhol
Researcher
AIET Envison Lab

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Dlithe Consultancy Services Pvt. Ltd.

CIN : U72900KA2019PTC121035

TO WHOMSOEVER IT MAY CONCERN

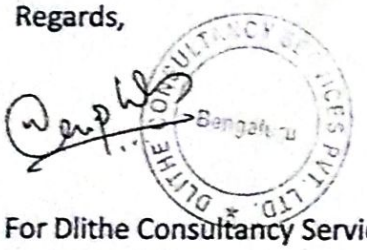
This is to certify that **Miss. PERSIS P** student of Alva's Institute of Engineering and Technology, Moodbidri **USN 4AL17EC069** has successfully undergone Internship at Dlithe Consultancy Services Pvt. Ltd. from 09th January to 13th March 2020

The Internship was aimed at learning and implementation of machine learning techniques using Python programming. As part of agile implementation, proof of concepts was developed and the results are stored in Github.

During this period, we found **PERSIS P** to be very sincere and hardworking.

We wish you all the best for future endeavors!

Regards,



For Dlithe Consultancy Services Pvt Ltd
Authorized Signatory

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Dlithe Consultancy Services Pvt. Ltd.

CIN : U72900KA2019PTC121035

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Mr. S NIKHIL TEJASVI** student of Alva's Institute of Engineering and Technology, Moodbidri **USN 4AL17EC104** has successfully undergone Internship at Dlithe Consultancy Services Pvt. Ltd. from 09th January to 13th March 2020

The Internship was aimed at learning and implementation of machine learning techniques using Python programming. As part of agile implementation, proof of concepts was developed and the results are stored in Github.

During this period, we found **S NIKHIL TEJASVI** to be very sincere and hardworking.

We wish you all the best for future endeavors!

Regards,

DLITHE CONSULTANCY SERVICES PVT. LTD. Bengaluru

For Dlithe Consultancy Services Pvt Ltd
Authorized Signatory

DLithe

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Dlithe Consultancy Services Pvt. Ltd.

CIN : U72900KA2019PTC121035

TO WHOMSOEVER IT MAY CONCERN

This is to certify that **Miss. HARSHITHA T** student of Alva's Institute of Engineering and Technology, Moodbidri **USN 4AL17EC106** has successfully undergone Internship at Dlithe Consultancy Services Pvt. Ltd. from 09th January to 13th March 2020

The Internship was aimed at learning and implementation of machine learning techniques using Python programming. As part of agile implementation, proof of concepts was developed and the results are stored in Github.

During this period, we found **HARSHITHA T** to be very sincere and hardworking.

We wish you all the best for future endeavors!

Regards,

DLITHE CONSULTANCY SERVICES PVT LTD. Bengaluru

For Dlithe Consultancy Services Pvt Ltd
Authorized Signatory

ದುರಸ್ತಿ ವಿಭಾಗ / ಓವರ್‌ಹಾಲ್ ಪ್ರಭಾಗ / OVERHAUL DIVISION
ಬೆಂಗಳೂರು ಸಂಕೀರ್ಣ / बेंगलूर कॉम्प्लेक्स / BANGALORE COMPLEX
ಹಿಂದೂಸ್ಥಾನ್ ಏರೋನಾಟಿಕ್ಸ್ ಲಿಮಿಟೆಡ್
हिन्दुस्तान एरोनॉटिक्स लिमिटेड
HINDUSTAN AERONAUTICS LIMITED
ಮಾನವ ಸಂಪನ್ಮೂಲ ಇಲಾಖೆ / मानव संसाधन विभाग
HUMAN RESOURCE DEPARTMENT

ಅಂಚೆ ಪೆಟ್ಟಿಗೆ ಸಂಖ್ಯೆ ೧೭೮೬, ಬೆಂಗಳೂರು-೫೬೦೦೧೭, ಭಾರತ
पोस्ट बैग सं.1786, बेंगलूरु - 560017, भारत
Post Bag No.1786, Bengaluru - 560017, India
Ph. : 91 - 80 - 2231 3521, 22322224
Fax : 91 - 80 - 2232 8112

O/HR/IR-251/121/2019 *13-08-2019*

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Ms. Divyashree L V, student of "Alva's Institute of Engineering and Technology", Moodbidri has successfully completed her Internship in Overhaul Division, Hindustan Aeronautics Ltd, Bengaluru from 17/07/2019 to 03/08/2019.

2. Her conduct and progress during the above period was found to be ***SATISFACTORY****.*

13/8/2019

(Rigi Jomy)
Chief Manager (HR)

ದುರಸ್ತಿ ವಿಭಾಗ / ಓವರ್‌ಹೌಲ್ ಪ್ರಭಾಗ / OVERHAUL DIVISION
ಬೆಂಗಳೂರು ಸಂಕೀರ್ಣ / बेंगलूर कॉम्प्लेक्स / BANGALORE COMPLEX
ಹಿಂದೂಸ್ಥಾನ್ ಏರೋನಾಟಿಕ್ಸ್ ಲಿಮಿಟೆಡ್
हिन्दुस्तान एरोनॉटिक्स लिमिटेड
HINDUSTAN AERONAUTICS LIMITED
ಮಾನವ ಸಂಪನ್ಮೂಲ ಇಲಾಖೆ / मानव संसाधन विभाग
HUMAN RESOURCE DEPARTMENT

ಅಂಚೆ ಪೆಟ್ಟಿಗೆ ಸಂಖ್ಯೆ ೧೭೮೬, ಬೆಂಗಳೂರು-೫೬೦೦೧೭, ಭಾರತ
पोस्ट बैग सं.1786, बेंगलूरु - 560017, भारत
Post Bag No.1786, Bengaluru - 560017, India
Ph. : 91 - 80 - 2231 3521, 2232 2224
Fax : 91 - 80 - 2232 8112

O/HR/IR-251/121/2019 *13-08-2019*

TO WHOM SO EVER IT MAY CONCERN

This is to certify that Ms. Yashaswini R, student of "Alva's Institute of Engineering and Technology", Moodbidri has successfully completed her Internship in Overhaul Division, Hindustan Aeronautics Ltd, Bengaluru from 17/07/2019 to 03/08/2019.

2. Her conduct and progress during the above period was found to be ***SATISFACTORY***.

13/8/2019

(Rigi Jomy)
Chief Manager (HR)

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT) ALLAHABAD

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ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY MOODBIDRI

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Certificate

This is to Certify that .....ABHISHEK ACHARYA..... *of Alva's Institute of Engineering and Technology, Moodbidri has Completed 25-Days Internship on* ***"DATA ANALYTICS&MACHINE LEARNING" Conducted by INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT), ALLAHABAD*** *in Association with* ***ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY,*** *Moodbidri from 22nd Jan to 12th Mar 2020.*

Dr. Praveen J
Program Coordinator

Prof. Mohammed Javed
Assistant Professor, IIIT Allahabad

Dr. Peter Fernandes
Principal
AIET, Moodbidri

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT) ALLAHABAD

&

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This is to Certify that JAGADEESH HEGDE *of Alva's Institute of Engineering and Technology, Moodbidri has Completed 25-Days Internship on* ***"DATA ANALYTICS&MACHINE LEARNING" Conducted by INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT), ALLAHABAD*** *in Association with* ***ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY,*** *Moodbidri from 22nd Jan to 12th Mar 2020.*

Dr. Praveen J
Program Coordinator

Prof. Mohammed Javed
Assistant Professor, IIIT Allahabad

Dr. Peter Fernandes
Principal
AIET, Moodbidri

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT) ALLAHABAD

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Dr. Praveen J
Program Coordinator

Prof. Mohammed Javed
Assistant Professor, IIIT Allahabad

Dr. Peter Fernandes
Principal
AIET, Moodbidri

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT) ALLAHABAD
&
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY MOODBIDRI

ALVA'S

Certificate

This is to Certify that K MUTHU *of Alva's Institute of Engineering and Technology, Moodbidri has Completed 25-Days Internship on* ***"DATA ANALYTICS&MACHINE LEARNING" Conducted by INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT), ALLAHABAD*** *in Association with* ***ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY,*** *Moodbidri from 22nd Jan to 12th Mar 2020.*

Dr. Praveen J
Program Coordinator

Prof. Mohammed Javed
Assistant Professor, IIIT Allahabad

Dr. Peter Fernandes
Principal
AIET, Moodbidri

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT) ALLAHABAD

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Certificate

This is to Certify that .....KISHAN SHETTY..... *of Alva's Institute of Engineering and Technology, Moodbidri has Completed 25-Days Internship on* ***"DATA ANALYTICS&MACHINE LEARNING" Conducted by INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT), ALLAHABAD*** *in Association with* ***ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY,*** *Moodbidri from 22nd Jan to 12th Mar 2020.*

Dr. Praveen J
Program Coordinator

Prof. Mohammed Javed
Assistant Professor, IIIT Allahabad

Dr. Peter Fernandes
Principal
AIET, Moodbidri

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT) ALLAHABAD

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ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY MOODBIDRI

ALVA'S Education Foundation

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This is to Certify that .....LEPAKSHI....T.V..... *of Alva's Institute of Engineering and Technology, Moodbidri has Completed 25-Days Internship on* ***"DATA ANALYTICS&MACHINE LEARNING" Conducted by INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT), ALLAHABAD*** *in Association with* ***ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY,*** *Moodbidri from 22nd Jan to 12th Mar 2020.*

Dr. Praveen J
Program Coordinator

Prof. Mohammed Javed
Assistant Professor, IIIT Allahabad

Dr. Peter Fernandes
Principal
AIET, Moodbidri

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT) ALLAHABAD

&

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ALVA'S
Education Foundation®

Certificate

This is to Certify that .....MADIWALAR.....AKSHATHA..... *of Alva's Institute of Engineering and Technology, Moodbidri has Completed 25-Days Internship on* ***"DATA ANALYTICS&MACHINE LEARNING" Conducted by INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT), ALLAHABAD*** *in Association with* ***ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY,*** *Moodbidri from 22nd Jan to 12th Mar 2020.*

Dr. Praveen J
Program Coordinator

Prof. Mohammed Javed
Assistant Professor, IIIT Allahabad

Dr. Peter Fernandes
Principal
AIET, Moodbidri

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT) ALLAHABAD

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This is to Certify that .....MANJUNATHA H K..... *of Alva's Institute of Engineering and Technology, Moodbidri has Completed 25-Days Internship on* ***"DATA ANALYTICS&MACHINE LEARNING" Conducted by INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT), ALLAHABAD*** *in Association with* ***ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY,*** *Moodbidri from 22nd Jan to 12th Mar 2020.*

Dr. Praveen J
Program Coordinator

Prof. Mohammed Javed
Assistant Professor, IIIT Allahabad

Dr. Peter Fernandes
Principal
AIET, Moodbidri

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT) ALLAHABAD

&

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY MOODBIDRI

ALVA'S
Education Foundation

Certificate

This is to Certify that RACHANA H *of Alva's Institute of Engineering and Technology, Moodbidri has Completed 25-Days Internship on* ***"DATA ANALYTICS&MACHINE LEARNING" Conducted by INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT), ALLAHABAD*** *in Association with* ***ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY,*** *Moodbidri from 22nd Jan to 12th Mar 2020.*

Dr. Praveen J
Program Coordinator

Prof. Mohammed Javed
Assistant Professor, IIIT Allahabad

Dr. Peter Fernandes
Principal
AIET, Moodbidri

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT) ALLAHABAD
&
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY MOODBIDRI

ALVA'S
Education Foundation

Certificate

This is to Certify that .....AKSHAN SANDEEP..... *of Alva's Institute of Engineering and Technology, Moodbidri has Completed 25-Days Internship on* ***"DATA ANALYTICS&MACHINE LEARNING" Conducted by INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT), ALLAHABAD*** *in Association with* ***ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY,*** *Moodbidri from 22nd Jan to 12th Mar 2020.*

Dr. Praveen J
Program Coordinator

Prof. Mohammed Javed
Assistant Professor, IIIT Allahabad

Dr. Peter Fernandes
Principal
AIET, Moodbidri

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT), ALLAHABAD
&
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY MOODBIDRI

ALVA'S
Education Foundation®

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This is to Certify that .....AKSHATHA M DESHPANDE..... *of Alva's Institute of Engineering and Technology, Moodbidri has Completed 25-Days Internship on* ***"DATA ANALYTICS&MACHINE LEARNING" Conducted by INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT), ALLAHABAD*** *in Association with* ***ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY,*** *Moodbidri from 22nd Jan to 12th Mar 2020.*

Dr. Praveen J
Program Coordinator

Prof. Mohammed Javed
Assistant Professor, IIIT Allahabad

Dr. Peter Fernandes
Principal
AIET, Moodbidri

INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT) ALLAHABAD

&

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ALVA'S Education Foundation®

Certificate

This is to Certify that BHAVITH ..... *of Alva's Institute of Engineering and Technology, Moodbidri has Completed 25-Days Internship on* ***"DATA ANALYTICS&MACHINE LEARNING" Conducted by INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT), ALLAHABAD*** *in Association with* ***ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY,*** *Moodbidri from 22nd Jan to 12th Mar 2020.*

Dr. Praveen J
Program Coordinator

Prof. Mohammed Javed
Assistant Professor, IIIT Allahabad

Dr. Peter Fernandes
Principal
AIET, Moodbidri

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AIET, Moodbidri

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This is to Certify that .....SANKEETH..... *of Alva's Institute of Engineering and Technology, Moodbidri has Completed 25-Days Internship on* ***"DATA ANALYTICS&MACHINE LEARNING" Conducted by INDIAN INSTITUTE OF INFORMATION TECHNOLOGY (IIIT), ALLAHABAD*** *in Association with* ***ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY,*** *Moodbidri from 22nd Jan to 12th Mar 2020.*

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Prof. Mohammed Javed
Assistant Professor, IIIT Allahabad

Dr. Peter Fernandes
Principal
AIET, Moodbidri

Nishanth

Gmail Sachin Krishna <nksachin99@gmail.com>

Reg. Attendance of your students at NARL

1 message

Dr. Nirvikar Dashora <ndashora@narl.gov.in> Thu, Feb 27, 2020 at 11:01 AM
To: "dattugujjar1972@gmail.com" <dattugujjar1972@gmail.com>, principal aiet <principalaiet08@gmail.com>, AIET Moodbidri HOD CSE <aietcse08@gmail.com>
Cc: sathvikshetty1261999@gmail.com, syedhudaif231@gmail.com, 99vikasrao@gmail.com, dhruvil.shah1999@gmail.com, nishu8453gowda@gmail.com, nksachin99@gmail.com, "Mr. Himanshu Sekhar Sethi" <sethi@narl.gov.in>

Dear Sirs
This is to inform you that following students have worked at NARL during 23 Jan 2020 and 02 March 2020 as part of their BTech training planned by AIET, Moodbidri, Mangalore.

CS Students
Batch
1. Vikas A. L. - 4al17cs109
2. Syed Hudaif Ibrahim - 4al17cs104
Batch
3. Shetty Sathvik Ravindra - 4al17cs089
4. Shah Dhruvil Amit - 4al17cs083

ECE students-
5. Nishantha V.R. - 4al17ec063
6. Sachin Krishna Moger - 4al17ec103

Please treat this email as my confirmation of part of training that these student have gone through at NARL. Since, NARL certification is not needful for AIET purpose, this e-mail suffice the cause of attendance.

Thanks and

Best regards
Nirvikar Dashora

Scientist-SF
National Atmospheric Research Laboratory (NARL)
Dept. of Space, Govt. of India
Gadanki-517 112
Phone (O)- +91 877 2500571
alternate email - nirvikardashora@gmail.com

Gmail Sachin Krishna <nksachin99@gmail.com>

Reg. Attendance of your students at NARL

1 message

Dr. Nirvikar Dashora <ndashora@narl.gov.in> Thu, Feb 27, 2020 at 11:01 AM
To: "dattugujjar1972@gmail.com" <dattugujjar1972@gmail.com>, principal aiet <principalaiet08@gmail.com>, AIET Moodbidri HOD CSE <aietcse08@gmail.com>
Cc: sathvikshetty1261999@gmail.com, syedhudaif231@gmail.com, 99vikasrao@gmail.com, dhruvil.shah1999@gmail.com, nishu8453gowda@gmail.com, nksachin99@gmail.com, "Mr. Himanshu Sekhar Sethi" <sethi@narl.gov.in>

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Thanks and

Best regards
Nirvikar Dashora

Scientist-SF
National Atmospheric Research Laboratory (NARL)
Dept. of Space, Govt. of India
Gadanki-517 112
Phone (O)- +91 877 2500571
alternate email - nirvikardashora@gmail.com

भारत सरकार
अन्तरिक्ष विभाग
राष्ट्रीय सुदूर संवेदन केन्द्र
बालानगर, हैदराबाद -500 037, तेलंगाना, भारत
टेलिफोन : +040-23879572-76
+040-23879261-65
फैक्स :+040-23878648

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Government of India
Department of Space
National Remote Sensing Centre
Balanagar, Hyderabad - 500 037, Telangana, India
Telephone : +040-23879572-76
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Fax : +040-23878648

Certificate

This is to certify that the project work entitled "**Globe - Satellite Model**" is a bonafide work done by **Abhishek M Shastry K,** B.E student of **Alva's Institute of Engineering and Technology,** Karnataka, India during the period Jan 10, 2020 to March 22, 2020.

This is a record of work carried out under my guidance and supervision.

Shafali Tandon

Shafali Tandon
Sci./Engr. 'SE'
Outreach Facility
National Remote Sensing
Centre, Hyderabad

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टेलिफोन : +040-23879572-76
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Shafali Tandon

Shafali Tandon
Sci./Engr. 'SE'
Outreach Facility
National Remote Sensing Centre, Hyderabad

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Shafali Tandon
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