




J.K.K.MUNIRAJAH COLLEGE OF TECHNOLOGY
Approved by AICTE, New Delhi and Affiliated to Anna University, Chennai
Accredited by NAAC with "A" Grade
T.N.Palayam (Po), Gobi (Tk), Erode (Dt) – 638 506



M.E Applied Electronics

ACADEMIC YEAR 2022-2023

S.NO	REGISTER NUMBER	STUDENT NAME	PROJECT WORK	INTERNSHIP
1	731221401001	DIVYA R	✓	
2	731221401002	SEETHASUGANTHI S	✓	✓
3	731221401004	SUDEEP J	✓	
4	731222401001	BAKYALAKSHMI P		✓
5	731222401002	DEEPIKA M		✓


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GOBI (TK), ERODE (DI).



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M.E – Applied Electronics

PROJECT DETAILS

Academic year 2022-2023

S.NO	REGISTER NUMBER	NAME OF THE STUDENT	TITLE OF THE PROJECT	GUIDE NAME
1	731221401001	R.DIVYA	IOT-BASED WEARABLE FALL PREDICTION AND DETECTION SYSTEM	Ms.S.ABINAYA
2	731221401002	S.SEETHASUGANTHI	SMART BAND FOR MONITORING HEALTH USING IOT DEVICE	Mrs.R.KOKILA
3	731221401004	J.SUDEEP	IOT BASED SMART GARBAGE MONITORING AND CONTROLLING SYSTEM	Mr.N.NAVINDRAN


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GOBI (TK), ERODE (Dt).

**IOT-BASED WEARABLE FALL PREDICTION AND
DETECTION SYSTEM**

PHASE II REPORT

Submitted by

DIVYA.R

(731221401001)

in partial fulfillment for the award of the degree

of

MASTER OF ENGINEERING

In

APPLIED ELECTRONICS



J.K.K MUNIRAJAH COLLEGE OF TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND

COMMUNICATION ENGINEERING

T.N PALAYAM

ANNA UNIVERSITY, CHENNAI-600 025

OCTOBER 2023



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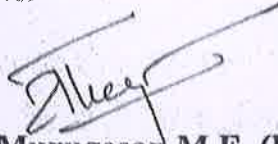
BONAFIDE CERTIFICATE

Certified that this project report titled "**IOT-BASED WEARABLE FALL PREDICTION AND DETECTION SYSTEM**" is the bonafide work of Ms. DIVYA.R (731221401001) who carried out the research under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.


U.Sasikala, AP/ECE

ASSISTANT PROFESSOR

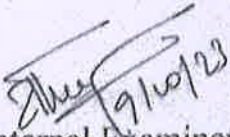
Department of Electronics and
Communication Engineering
J K K Munirajah College of
Technology ; T.N.Palayam



Mr.C.Murugesan M.E.,(Ph.D) .,


ECE HEAD OF DEPARTMENT

Department of Electronics and
Communication Engineering
J K K Munirajah College of
Technology, T.N.Palayam

Submitted for the project Viva-Voice Examination held on: 9.10.2023


Internal Examiner


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T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).


External Examiner

ABSTRACT

In fact, falls exponentially increase with age-related biological changes, which is leading to a high incidence of falls and fall related injuries in the aging societies. In this context, assist device that could help to alleviate this major health problem are a social necessity. Most traditional medical alert monitoring systems rely on a pendant or button that your loved one must press in order to call for help. These systems are highly effective and save lives every day. Some seniors, though, are at a higher risk of falling than others. There is the possibility that when your loved one falls, they may be unable to press their medical alert button to call for help. This is where Automatic Fall Detection comes in. The benefits of automatic fall detection to seniors can be great. Also, if you or your loved one has diabetes or another condition that increases your risk of falling, this feature might provide you with additional piece of mind. If your loved one sustains an injury or becomes unconscious from a fall and they are alone, their chance of getting help fast is increased significantly by automatic fall detection technology.



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6. CONCLUSION

The patient fall detection and heart stroke prediction system has been proposed in this paper. By using various sensors, the system has measured heart pulse rate, body temperature, relative humidity and position of the patient. Any abnormalities were detected in the acceleration sensors, the system will produce alert to caregivers through IoT technology. The other parameters like body temperature, relative humidity and heart pulse rate is quantitatively analyzed with the risk data sent and the probability of heart stroke is measured by using machine learning algorithm. This alert and verified data send to the hospital, doctors and caregivers through IoT Cloud channel. After the alert, is very much helpful for quick recovery and standard the treatment. Our proposed system are very efficient and high accuracy of detection is observed.



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T.N. PALAYAM (Po)-638 506.
GOBI (TK), ERODE (Dt).

**SMART BAND FOR MONITORING HEALTH USING IOT
DEVICE**

PHASE II REPORT

Submitted by

SEETHASUGANTHI.S

(731221401002)

in partial fulfillment for the award of the degree

of

MASTER OF ENGINEERING

In

APPLIED ELECTRONICS



J.K.K MUNIRAJAH COLLEGE OF TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND

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OCTOBER 2023

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T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).**

BONAFIDE CERTIFICATE

Certified that this project report titled "**SMART BAND FOR MONITORING HEALTH USING IOT DEVICE**" is the bonafide work of Ms. SEETHASUGANTHILS (731221401002) who carried out the research under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

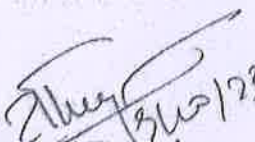

R.Kokila, AP/ECE

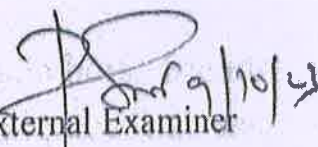
ASSISTANT PROFESSOR
Department of Electronics and
Communication Engineering
J K K Munirajah College of
Technology , T.N.Palayam



Dr.C.Murugesan M.E.,Ph.D .,

HEAD OF DEPARTMENT
Department of Electronics and
Communication Engineering
J K K Munirajah College of
Technology, T.N.Palayam

Submitted for the project Viva-Voice Examination held on: **9.10.2023**


Internal Examiner


External Examiner


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OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

ABSTRACT

Today, the humans are completely dependent on technology and are struggling hard to make it more advanced. People have made their life more complex and busy. In their busy schedule they don't bother for their health. Hence, we have developed a project titled "Smart Health Band". The purpose of this project is to autonomously monitor the health of the person. This health band can sense body temperature and pulse rate of a person. Upon sensing the temperature and pulse rate, the data is to be sent to a cloud. Here, a graph displays the sensed temperature and pulse rate. This data is then fetched on a mobile application. Hence, user can see the pulse rate and body temperature by using the application. In critical condition, if the pulse rate drastically increases/decreases above or below the threshold value, then a notification will be sent to the doctor. Smart Health Band is constructed with the help of Arduino Uno, pulse sensor, temperature sensor, Wi-Fi module, batteries and Velcro Tape to be mounted on. This project intends to decrease the death rates which occur due to the heart attack or heart related issues.



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GOSI (Tr), ERODE (Dt).

6. CONCLUSION:

This paper is based on our project for the final year of engineering. Being an application of Internet of Things (IoT), this project proves to be an autonomous health monitoring system. The said project is able to continuously sense pulse rate and body temperature of the person wearing the band. The project can be further extended to create a whole new system of connected smart health bands so that everyone will be monitored and given proper treatment at right time. With more advanced and reliable sensors, the health band can be more efficient. This project can be a life saying band for people who do not have sufficient time to take care of their health or people who live alone and do not have someone to look after.



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T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

**IOT BASED SMART GARBAGE MONITORING AND
CONTROLLING SYSTEM**

PHASE II REPORT

Submitted by

SUDEEP.J

(731221401004)

in partial fulfillment for the award of the degree

of

MASTER OF ENGINEERING

In

APPLIED ELECTRONICS



J.K.K MUNIRAJAH COLLEGE OF TECHNOLOGY

DEPARTMENT OF ELECTRONICS AND

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T.N PALAYAM

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OCTOBER 2023

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T.N. PALAYAM (Po)-638 506.
GOBI (TK), ERODE (Dt).

BONAFIDE CERTIFICATE

Certified that this project report titled **"IOT BASED SMART GARBAGE MONITORING AND CONTROLLING SYSTEM"** is the bonafide work of Mr. **SUDEEP.J (731221401004)** who carried out the research under my supervision. Certified further, that to the best of my knowledge the work reported herein does not form part of any other project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

U.S. Sasikala
U.SASIKALA,AP/ECE

Mr. C. Murugesan
Mr.C.Murugesan M.E.,(Ph.D) ,,

ASSISTANT PROFESSOR

ECE HEAD OF DEPARTMENT

Department of Electronics and

Department of Electronics and

Communication Engineering

Communication Engineering

J K K Munirajah College of

J K K Munirajah College of

Technology , T.N.Palayam

Technology, T.N.Palayam

Submitted for the project Viva-Voice Examination held on: **9-10-2023**


Mr. C. Murugesan
Internal Examiner

Dr. R. Srinivasan
External Examiner

Teena
PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (TN)-638 506.
G.OBI (TK), ERODE (DI).

ABSTRACT

The Internet of Things (IoT) shall be able to incorporate transparently and seamlessly a large number of different and heterogeneous end systems, while providing open access to selected subsets of data for the development of a plethora of digital services. One of the main concerns with our environment has been solid waste management which in addition to disturbing the balance of the environment also has adverse effects on the health of the society. The detection, monitoring and management of wastes is one of the primary problems of the present era. The traditional way of manually monitoring the wastes in waste bins is a complex, cumbersome process and utilizes more human effort, time and cost which is not compatible with the present day technologies in any way. This an advanced method in which waste management is automated. This project IoT Garbage Monitoring system is a very innovative system which will help to keep the cities clean. This system monitors the garbage bins and informs about the level of garbage collected in the garbage bins via a web page. This web page also sends all information to garbage collection vehicles.


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6. CONCLUSION


To conclude from the researches carried out on waste management worldwide, the garbage needs to be segregated and then disposed appropriately. This can help in reducing huge pyramids forming at the garbage dumping grounds.

This model segregates the litter effectively from its source itself. This will help to cut down the tedious and monotonous process of the waste segregation. This system integrates for garbage monitoring and collection in a way which enables optimum use of resources. The system proposes a real time optimum solution for a tiresome problem of junk management. The system improves the garbage management by reducing the possibility of spill over of rubbish in cities.

The system also provides a broader overview of scrap generation pattern of the city which further can be utilized for better planning of waste management by centrally providing the real time scenario of any locality where the system is employed.

6.1. FUTURE WORK

In future, the data can be enhanced, that is stored on the server helps to compute the optimized collection routes for the collector. The scope for future work is the implementation of same system with less complexity at affordable costs and more security to the sensors so its life is increased.


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INTERNSHIP



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T.N.Palayam (Po), Gobi (Tk), Erode (Dt) – 638 506



M.E – Applied Electronics

Academic Year: 2022-2023

Internship Details

S. No	REGISTER NUMBER	NAME OF THE STUDENT	NAME OF THE COMPANY	LOCATION	DATE
1	731222401001	BAKYALAKSHMI P	Inno Mektronic	No.12, Maruthi Nagar, Avarampalayam, Coimbatore - 641006	20.02.2023
2	731222401002	DEEPIKA M			08.03.2023
3	731221401002	SEETHASUGANTHI S	Universal Power Supplies	Varanapuram, Bhavani – 638301	01.05.2023 TO 30.06.2023


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GOBI (TK), ERODE (Dt).



ELECTRONICS COMMUNICATION <jkkmctece2013@gmail.com>

INTERNSHIP REQUISITION

2 messages

ELECTRONICS COMMUNICATION <jkkmctece2013@gmail.com>
To: Inno Mektronic <innomektronic@gmail.com>

Mon, Feb 13, 2023 at 10:41 AM

Sir,

On behalf of J.K.K.Munirajah College of Technology, we wish to request for permission to do **Internship** at your company INNOMEKTRONIC. Our college is reputed at providing quality education in the various courses.


We wish to undertake our students an **Internship** at your company from 20.02.2023 to 08.03.2023 acquire practical knowledge. Our academic curriculum focuses on engaging students in practical experiences to observe the implementation of what they are studied in college. We believe that your company will give relevant knowledge during this visit.

The students P.Bakyalakshmi, M.deepika are intend to participate in this Internship. Please allow our students to do an Internship at your company and meet your skilled employee. Thank you in advance.

With Regards,
HoD/ECE

ECE DEPARTMENT

ECLON WELCOMES U ALL..

 **NAME LIST.docx**
48K

Inno Mektronic <innomektronic@gmail.com>
To: ELECTRONICS COMMUNICATION <jkkmctece2013@gmail.com>

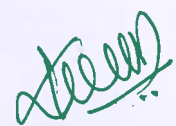
Tue, Feb 14, 2023 at 04:20 PM

*Congratulations! It is with great pleasure that we welcome your students to join as **intern** at our INNOMEKTRONIC in coimbatore.
If you have any queries of require any further information, please do not hesitate to contact the human resources department.
May we take this opportunity of wishing you a successful association with INNOMEKTRONIC.*

WITH REGARDS

INNO MEKTRONIC

COIMBATORE


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GOBI (Tk), ERODE (Dt).



INNO MEKTRONIC
THE E.M.S. COMPANY



CERTIFICATE OF INTERNSHIP

**This Internship certificate is proudly awarded to
P.BAKYALAKSHMI (REG NO: 731222401001)**

For her outstanding completion of the **internship** program at the firm **INNOMEKTRONIC(The EMS COMPANY)** under the guidance of Mrs.Mangai from 20.02.2023 to 08.03.2023. She is found to be Hardworking, Sincere and diligent. We wish her all the best for future.

CEO

M.NANDHA GOPAL

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

PROGRAM MANAGER

M.LOGAMANGAI

INNO MEKTRONIC
No. 12, Maruthi Nagar,
Avarampalayam, Coimbatore-641006
Tamilnadu, India.
GSTIN: 33AAGFI0431B1Z8



INNO MEKTRONIC
THE E.M.S. COMPANY



CERTIFICATE OF INTERNSHIP

This Internship certificate is proudly awarded to

M.DEEPIKA (REG NO: 731222401002)

For her outstanding completion of the **internship** program at the firm **INNOMEKTRONIC(The EMS COMPANY)** under the guidance of Mrs.Mangai from 20.02.2023 to 08.03.2023. She is found to be Hardworking, Sincere and diligent. We wish her all the best for future.

CEO

M.NANDHA GOPAL

PRINCIPAL
JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (TK), ERODE (Dt).

PROGRAM MANAGER

M.LOGAMANGAI

INNO MEKTRONIC
No. 12, Maruthi Nagar,
Avarampalayam, Coimbatore-641006
Tamilnadu, India.
GSTIN: 33AAGFI0431B1Z8



INTERNSHIP REQUISITION

2 messages

ELECTRONICS COMMUNICATION <jkkmctece2013@gmail.com>
To: power supplies <gbro@gmail.com>

Fri, Apr 21, 2023 at 10:05 AM

Sir,

On behalf of J.K.K.Munirajah College of Technology, we wish to request for permission to do **Project Internship** training at your company Universal Power supplies.


We wish to undertake our students a **Project Internship** training at your company from 01.05.23 onwards upto two months to complete their project. As per the curriculum, the student needs to join a two month long internship and attain a certificate after satisfactory training. It will be a golden opportunity for the students as they will get to learn a lot of new things. We believe that your company will give relevant knowledge and training during this internship to complete their project.

Our student S.Seethasuganthi is intend to participate in this Project Internship. Please allow our student to do Project Internship at your company and meet your skilled employee. Thank you in advance.

With Regards,
HoD/ECE

ECE DEPARTMENT

ECLON WELCOMES U ALL..

 INTERNSHIP.pdf
142K

power supplies <gbro@gmail.com>

Mon, Apr 24, 2023 at 10:05 AM

To: ELECTRONICS COMMUNICATION <jkkmctece2013@gmail.com>

Dear Sir,

With great pleasure we welcome the listed student from your attached letter, to do **project internship** training in our company from 01.05.2023 onwards.

Best Regards,
UPS



UPS

PRINCIPAL
JKK MUNIRAJAH COLLEGE
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T.N. PALAYAM (Po)-638 506.
GOBI (TK), ERODE (Dt).

UNIVERSAL POWER SUPPLIES

Department of R & D Centre,
Varanapuram, Bhavani, Tamil Nadu 638301

Phone: 099421 07795

Website: www.gbro.in

Date: **30.06.2023**

TO WHOMSOEVER IT MAY CONCERN

This is to certify that the student **Ms.S.SEETHASUGANTHI** (Reg. No: 731221401002) M.E.-Applied Electronics Second Year from J.K.K.Munirajah College of Technology, T.N.Palayam, Gobi, has satisfactorily completed her **Internship** during the period of 01.05.2023 to 30.06.2023.

She worked on the project titled "**SMART BAND FOR MONITORING HEALTH USING IOT DEVICE**" under our guidance.

During the above mentioned period her conduct and behavior remains good,
We wish her all the best for future.

For



Electronics R & D Manufacturing
Universal Power Supplies

Project Manager
UNIVERSAL POWER SUPPLIES

Opp. Bhavani G.H.,
Bhavani - 638 301.
Contact : 88833 96669

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JKK MUNIRAJAH COLLEGE
OF TECHNOLOGY
T.N. PALAYAM (Po)-638 506.
GOBI (Tk), ERODE (Dt).

Regd.Office: Varanapuram, Bhavani, Tamil Nadu 638301

Phone: 099421 07795 Website: www.gbro.in