

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

“Jnana Sangama” Belagavi – 590 010



PROJECT REPORT ON
“LI-FI BASED PATIENT HEALTH MONITORING
SYSTEM”

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

BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING

Submitted By

Name
AISHWARYA KENI
ASHA V.
CHAITHRA S. T.
D. NOOTANA

USN
4AL13EC004
4AL13EC009
4AL13EC016
4AL13EC019

Under the Guidance of
Mr. PRADEEP KUMAR K.

Assistant Professor
Department of E&C Engineering



DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225.

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ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

MOODBIDRI – 574 225

(Affiliated to VTU, BELAGAVI)

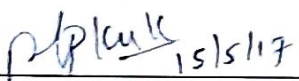
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CERTIFICATE

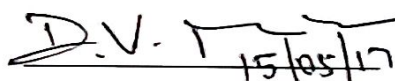
Certified that the project work entitled “**LI-FI BASED PATIENT HEALTH MONITORING SYSTEM**” is a bonafide work carried out by

Aishwarya Keni	4AL13EC004
Asha V	4AL13EC009
Chaithra S T	4AL13EC016
D Nootana	4AL13EC019

in partial fulfillment for the award of **BACHELOR OF ENGINEERING** in **ELECTRONICS & COMMUNICATION ENGINEERING** of the **VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI** during the year 2016–2017. 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.


15/05/17

Signature of the Guide
Mr. Pradeep Kumar K.


15/05/17

Signature of the H.O.D
Dr. D. V. Manjunatha

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



Signature of the Principal
Dr. Peter Fernandes
PRINCIPAL
Alva's Institute of Engg. & Technology,
Mijar, MOODBIDRI - 574 225, D.K.

EXTERNAL VIVA

Name of the Examiners

1.....

2.....

Signature with date

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ABSTRACT

This project presents the development of microcontroller and Light Fidelity (Li-Fi) based health care system. It focuses on the patient health monitoring in the hospitals using the Li-Fi technology. Li-Fi provides transmission of data through illumination by sending data through a Light Emitting Diode (LED) light matrix that varies in intensity faster than the human eye can follow. Li-Fi is high speed and fully networked wireless optical communication and is a form of Visible Light Communication (VLC).

The proposed model helps in patient health monitoring in the hospitals and can be done by using the concept of Li-Fi instead of the Wireless Fidelity (Wi-Fi) technology to avoid the frequency interference with the human body. Sensors such as temperature, heart beat and saline level detector are used in this model to perform its respective functions. These sensors collect the data from the human body and are fetched to the microcontroller and the microcontroller convert these sensor values from analog to the digital form. The microcontroller that is used here is PIC16F877A. The output from the microcontroller is fed to the Li-Fi module which transmits the data in the form of light and the receiver end collects this data and then displays the corresponding sensor values on the 16x2 Liquid Crystal Display (LCD). It also displays warning information if any abnormalities occur. A low cost, harmless, user friendly Li-Fi based advanced patient monitoring system is developed. The purpose of this project is to help those peoples who need help in emergency in remote location as fast as possible. The intensive parameters of the patient body will be displayed on the LCD.