

**VISVESVARAYA TECHNOLOGICAL UNIVERSITY,
BELAGAVI - 590018**



Mini Project Report

On

“Smartphone Control RGB Scrolling Text Display LED Matrix”

A report submitted in partial fulfillment of the requirements for

MINI PROJECT (21ECMP67)

In

Electronics And Communication Engineering

Submitted by

BHASKAR T

4AL21EC014

KISHOR U

4AL21EC041

LAKSHMI KEERTHANA B

4AL21EC043

MAHANTESH S T

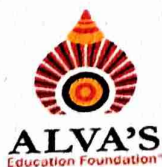
4AL21EC046

Under the Guidance of

Dr.Siddesh G K

Professor

Dept. of Electronics and Communication Engineering



**DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING
ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY MIJAR,**

(Unit of Alva's Education Foundation @, Moodbidri)

Affiliated to Visvesvaraya Technological University, Belagavi,

Approved by AICTE, New Delhi, Recognized by Government of Karnataka.

Accredited by NACC with A+ Grade

Shobavana Campus, Mijar, Moodbidri, D.K., Karnataka

2023 – 2024



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

CERTIFICATE

This is to certify that the Project entitled **"Smartphone Control RGB Scrolling Text Display LED Matrix"** has been successfully completed by

BHASKAR T

4AL21EC014

KISHOR U

4AL21EC041

LAKSHMI KEERTHANA B

4AL21EC043

MAHANTESH S T

4AL21EC046

The Bonafide students of the Department of Electronics and Communication Engineering, Alva's Institute of Engineering and Technology of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2023-2024. 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 the Project work prescribed for the Bachelor of Engineering Degree.

Siddesh

Dr. Siddesh G K

Mini Project Guide

gk

Dr. Ganesh V N

Mini Project Coordinator

[Signature]

Dr. Dattathreya

HOD, Dept. of ECE

H. O. D.

Dept. Of Electronics & Communication
Institute of Engg. & Technology
Mijar, MOOBBIDRI - 574 225

ABSTRACT

This project presents a novel approach to displaying messages using a LED scrolling display controlled by an Android phone via Bluetooth technology. The system consists of two main components: a message transmission section using an Android phone and a reception and displaying section using an AVR microcontroller, Bluetooth receiver, and a LED display. The Android phone is used to transmit text messages to the LED display using an APK application, which sends the message to the Bluetooth receiver connected to the AVR microcontroller. The microcontroller then displays the message on the LED display using a scrolling technique.

The LED display is a 3-color matrix display consisting of 16 rows and 32 columns, capable of displaying alphanumeric characters and symbols. The system uses a P10 LED module, Bluetooth module, and an AVR microcontroller as the main components. The project aims to provide a cost-effective and efficient way of displaying messages, particularly in advertising and public information systems. The use of Bluetooth technology allows for wireless communication between the Android phone and the LED display, making it easy to update messages remotely. The system has several advantages, including low power consumption, long lifespan, and high brightness. The LED display is also environmentally friendly and energy-efficient. The project has a wide range of applications, including advertising, public information systems, and transportation systems.

Overall, this project demonstrates a innovative approach to displaying messages using LED technology and Bluetooth communication. The system is cost-effective, efficient, and environmentally friendly, making it a viable solution for various applications.