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ANDROID CONTROLLED ROBOT USING BLUETOOTH

Submitted as Micro-controller and Embedded systems assignment work

BY

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ALVA'S INSTITUTE OF ENGINEERING AND TECHNOLOGY MIJAR, MOODBIDRI D.K. -574225 KARNATAKA

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CERTIFICATE

This is to certify that, assignment work for the subject "Micro-controller and Embedded systems" has been successfully completed and report submitted by **Manvitha S Rai (4AL21CS069)** during the academic year 2022–2023. It is certified that all corrections/suggestions indicated presentation session have been incorporated in the report and score 09 Marks out of 10 and deposited in the departmental library.

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This is to certify that, assignment work for the subject "Micro-controller and Embedded systems" has been successfully completed and report submitted by **Prathiksha S Hegde (4AL21CS100)** during the academic year 2022–2023. It is certified that all corrections/suggestions indicated presentation session have been incorporated in the report and score 09 Marks out of 10 and deposited in the departmental library.

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Chapter 01

ANDROID CONTROLLED ROBOT USING BLUETOOTH

Abstract:

This report outlines the implementation of an Android-controlled robot using Bluetooth communication. The project involves designing a robot that can be controlled remotely through a mobile application running on an Android device.

Bluetooth technology is utilized to establish a wireless connection between the robot and the Android device, allowing users to send commands and control the robot's movements. The report covers the hardware components, software design, and implementation details of the project.

1.1 Introduction:

The advancement in wireless communication technologies has led to the development of remote-controlled robots for various applications, including education, entertainment, surveillance, and more. Bluetooth, a short-range wireless technology, offers a convenient way to control robots using smartphones or tablets. In this project, we explore the design and implementation of an Android-controlled robot using Bluetooth communication.

Android controlled robot project make use of an Android mobile phone for robotic control with the help of Bluetooth technology. This is a simple robotics projects using microcontroller.

This project is a Bluetooth controlled robot. For this the android mobile user has to install an application on her/his mobile. Then user needs to turn on the Bluetooth in the mobile. The wireless communication techniques used to control the robot is Bluetooth technology. User can use various commands like move forward, reverse, stop move left, and move right. These commands are sent from the Android mobile to the Bluetooth receiver.

Android based robot has a Bluetooth receiver unit which receives the commands and give it to the microcontroller circuit to control the motors. The microcontroller then transmits the signal to the motor driver ICs to operate the motors.