

A PROJECT REPORT

ON

“REMOTE GRIP ROVER “

Is submitted to

JAWAHARLAL NEHRU TECHNOLOGICAL UNIVERSITY, ANANTAPUR

In partial fulfilment of

the requirements for the award of the degree of

BACHELOR OF TECHNOLOGY

In

ELECTRONICS AND COMMUNICATION ENGINEERING

During the academic year 2023-2024

Submitted by

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CERTIFICATE

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ACKNOWLEDGEMENT

It is a great pleasure to express my deepest sense of gratitude and indebtedness to our internal guide **Dr. N. Karthikeyan**, Assistant Professor of Electronics and Communication Engineering department, Sri Venkateshwara Institute of Technology, Anantapuramu, for having been a source of constant inspiration, precious guidance and generous assistance during the internship. I deem it as a privilege to have worked under his able guidance. Without his close monitoring and valuable suggestions this work wouldn't have taken this shape. I feel that his help is un-substitutable and unforgettable.

I wish to express my sincere thanks to **L. RANGASWAMY**, Assistant Professor, project co-ordinator, Dept of Electronics and Communication Engineering, Sri Venkateswara Institute of Technology, Anantapuramu for giving their valuable suggestions for the completion of the project.

I wish to express my sincere thanks to **Smt. T. RANJITHA DEVI**, Head., Dept of Electronics and Communication Engineering, Sri Venkateswara Institute of Technology, Anantapuramu, for giving their valuable suggestion and providing an eminent guide for the completion of the project.

I wish to express my sincere thanks to **Dr. T. VISHNU VARDHAN**, Principal, Sri Venkateswara Institute of Technology, Anantapuramu, for providing the facilities at the campus for the completion of the project.

I wish to express my thanks to my **PARENTS** for providing me good environment to complete this work.

Finally, I thank to all Teaching and Non-Teaching Staff of Electronics and Communication Engineering department and friends for their valuable support and co-operation in the laboratories and helping me throughout degree program.

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ABSTRACT

A robot is usually an electro-mechanical machine that is guided by computer and electronic programming. Many robots have been built for manufacturing purpose and can be found in factories around the world. Designing of the latest inverted ROBOT which can be controlling using an APP for android mobile. We are developing the remote buttons in the android app by which we can control. The robot motion with them. And in which we use Bluetooth communication to interface controller and android. Controller can be interfaced to the Bluetooth module through UART protocol. According to commands received from android the robot motion can be controlled. The consistent output of a robotic system along with quality and repeatability are unmatched. Pick and Place robots can be Reprogrammable and tooling can be interchanged to provide for multiple applications.

Human-following robots have been researched and developed actively these decades due to its plentiful applications in daily life and manufacturing. A human-following robot requires several techniques such as human's target detection, robot control algorithm and obstacles avoidance. Various approaches of following robots have been proposed such as using ultrasonic sensors, voice recognition sensors, laser range sensors, charge-coupled device (CCD) camera and so on. These technologies detect the relative position between a mobile robot and a human. In this research, a robust vision-based target detection system that detects a custom-designed tricolored belt with short initialization time, and a computationally less complex Robot Control Architecture was proposed using Fuzzy logic and Subsumption architecture to achieve these goals. The robust performance of the proposed approach is illustrated by the experimental results on a real-world robot which maintains accuracy, hardware cost as well as simplicity of the system and ensures that the robot follows the target person stably, smoothly, and safely.

Keywords: IR sensors, DC geared motors, Arduino board, Robotic arm kit, battery, Android phone, motor drivers, Ultrasonic sensor.

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