

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

"Jnana Sangama" Belagavi – 590 010



**PROJECT REPORT ON
DESIGN AND IMPLEMENTATION OF SELF
BALANCING MED-BOT**

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

**BACHELOR OF ENGINEERING
IN
ELECTRONICS & COMMUNICATION ENGINEERING**

Submitted By

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

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ALVA'S INSTITUTE OF ENGINEERING & TECHNOLOGY

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DEPARTMENT OF ELECTRONICS & COMMUNICATION ENGINEERING

CERTIFICATE

Certified that the project work entitled **DESIGN AND IMPLEMENTATION OF SELF BALANCING MED-BOT** is a bona fide work carried out by

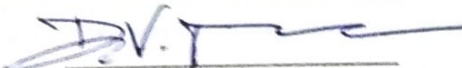
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in partial fulfillment for the award of BACHELOR OF ENGINEERING in ELECTRONICS & COMMUNICATION ENGINEERING of the VISVESVARAYA TECHNOLOGICAL UNIVERSITY, BELAGAVI during the year 2020-2021. It is certified that all corrections/suggestions indicated 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.



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ABSTRACT

Whenever any disasters take place like floods, there is a need to design appropriate product which helps the rescue team to transport medicines to the effected people. The rescue team usually will be focusing on saving people in flood spots, but the people who have been saved and are in the rescue camps need proper medication and their necessities have to be taken care of. Also there will be least amount of rescuers available to save people during floods. In such scenario it becomes difficult to the rescue team to focus on saving people who are stuck in floods and also taking care of people who are effected and are in camps.

This project is based on a development of Self Balancing two wheeled bot. In particular, the focus is on the electro-mechanical mechanisms & control algorithms required to enable the robot to perceive and act in real time. The two wheeled self balancing bot is an example of advanced development in the field of robotics. The concept of two-wheel self-balancing robot is based on Inverted pendulum theory. This type of robot has earned interest and fame among researchers and engineers of worldwide as it based on such a control system that is used to stabilize an unstable system using efficient micro controllers and sensors. These robots provide exceptional robustness and capability due to their smaller size and power requirements. These types of implementations find applications in several purposes such as surveillance & transportation.

This paper proposes a system that will act as a helper hand to the rescue team in the flood affected areas. The Proposed System will be able to carry medicines and necessary items to each bed in the rescue camps. Because of this kind of system the flood effected people can get quick medications. As there will be less availability of people in the rescue team, this kind of bots helps for transportations with less human assistance.