

A Report on
DESIGN AND FABRICATION OF AMR TORTOISE ROBOT
USING FUSION 360 AND GAZEBO SIMULATION

**A Project report submitted for the partial fulfillment of the requirements for award
of Degree of**

BACHELOR OF TECHNOLOGY
IN
MECHANICAL ENGINEERING

Submitted by

VATTURI VIJAYA ADITYA ROHITH	20811A0342
SIYADRI SATYA SAI	20811A0338
SURYA PRAKASH REDDY	20811A0339
NOTLA SURESH	20811A0329
CHADALAVADA ROHITH	20811A0309

Under the guidance of

Dr. Ch. SURESH

Associate Professor



DEPARTMENT OF MECHANICAL ENGINEERING

AVANTHI INSTITUTE OF ENGINEERING AND TECHNOLOGY

**(Permanently affiliated to JNTU-Gurajada Vizianagaram, Accredited by NAAC A+,
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TAMARAM, MAKAVARAPALEM, NARSIPATNAM, ANAKAPALLI DIST. - 531113

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DEPARTMENT OF MECHANICAL ENGINEERING

AVANTHI INSTITUTE OF ENGINEERING & TECHNOLOGY



CERTIFICATE

This is to certify that the project entitled “**DESIGN AND FABRICATION OF AMR TORTOISE ROBOT USING FUSION 360 AND GAZEBO SIMULATION**” is the record of the work carried out by VATTURI VIJAYA ADITYA ROHITH (20811A0342), SIYADRI SATYA SAI (20811A0338), SURYA PRAKASH REDDY (20811A0339), NOTLA SURESH (20811A0329), CHADALAVADA ROHITH (20811A0309) students of final year B. Tech in the department of Mechanical engineering. This work is done for the partial fulfillment for the award of BACHELOR OF TECHNOLOGY during the year 2023-2024.


Project Guide

Dr. Ch. SURESH

Associate Professor


Head of the Department

Dr. V. HARI KIRAN

Associate Professor

Head of the Department
Department of Mechanical Engg.
Avanthi Institute of Engg. & Tech.,
Makavarapalem, Anakapalli Dt. -531113


External Examiner 27/4/24

ABSTRACT

This Thesis focuses on simulating the behaviors and movement of the Tortoise Robot in a virtual 3D environment. Through advanced modeling techniques, it replicates real-world scenarios to test navigation algorithms and optimize robot performance. By utilizing simulation, it significantly reduces costs associated with physical hardware while providing students and enthusiasts with a hands-on learning experience in robotics. The focus lies on enhancing autonomy and efficiency in education, where learners can experiment, iterate, and understand robotic principles in a virtual environment.