Siddhant Thalal

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EDUCATION

IIT JODHPUR
B TECH IN Mechanical Engineering
2021 - 2025
CGPA : 7.97 (till 7th semester)

GONDIA PUBLIC SCHOOL
High School
2017 - 2019
Percentage : 89.4

GONDIA PUBLIC SCHOOL
Intermediate
2019 - 2021
Percentage : 87.6

SKILLS

ROBOTICS AND AUTOMATION

• Iot • Ros2 • Matlab/Simulink • Control systems
• Embedded Systems • Sensor integration • CAD

PROGRAMMING LANGUAGES

• Java • C
Familiar:
• Matlab• Python •PLC programming (Ladder Logic)

VCS & BUILD TOOLS

• Git • Github

FRONTEND

• HTML • CSS • Java Script • Bootstrap

BACKEND

• Node.js • Express

DATABASE MANAGEMENT

• MongoDB • MySQL

AWARDS/ACHIEVEMENTS

International Mathematics Olympiad Zonal Rank 17.
Secured an A grade in Data Structures and Algorithms course

COURSEWORK

•Mechatronics
•Digital fabrication
•Manufacturing Process - Smart Manufacturing
•Introduction to Robotics - Experimental Robotics
•Control of mechanical system
•Introduction to Cyber-Physical Systems
•Design of machine Elements

PROJECTS

LAND ROVER, JAGUAR (INTER IIT- TECHMEET) ROBOTIC CHARGING CHALLENGE | CAD, Open CV , Iot, Embedded system, Control

- ML model was created to find charging socket using image recognition and then according to the input coordinates plugging the socket. It involves the development of an intelligent system that combines machine learning and robotics to autonomously perform a specific task. Ideation: development of robot and its movement. Image recognition for finding charging port. Finding the angle for plug using vector analysis and coordinates of end effector using forward kinematics and ML.

ROBOGUIDE: AUTONOMOUS CAMPUS NAVIGATOR FOR COLLEGE STUDENTS | Path Planning, Embedded system, Control, Iots

- Developed a path planning system using GPS sensors to collect location data, transmitted to a mobile app for processing and navigation commands. Implemented motor control algorithms for navigation and integrated LIDAR and ultrasonic sensors for obstacle detection, including dynamic ones. Designed and integrated hardware and software for seamless operation.

QUADRUPED ROBOT | CAD, Path Planning, Embedded system, Control, Iots

- Developed and tested the robot's leg, focusing on design, movement, and control. Conducted experiments to refine gait and ensure stable operation.

PERSONAL PORTFOLIO WEBSITE | HTML, CSS, JavaScript

- Developed a responsive personal portfolio website to effectively showcase projects and skills, incorporating interactive features like smooth scrolling, modals, and dynamic content loading using JavaScript. Designed custom animations and transitions to enhance user engagement and improve the overall user experience. –Portfolio Link

SUSPENSION SYSTEM | CAD, Design Of Machine Elements

- Developed a detailed CAD model of a suspension system, calculating dimensions based on stress, strain, and fatigue failure. Conducted simulations to validate the system's ability to handle real-world loads.