KOTTAPETA SAI

Aspiring Robotics Researcher

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SUMMARY

I am a passionate robotics enthusiast with hands-on experience in developing innovative robotic systems. My skills in control systems, embedded systems, and AI integration have led to successful projects and achievements in competitions. I am committed to solving real-world challenges and eager to contribute to impactful research in the field of robotics.

EDUCATION

Bachelor of Technology in Electronics & Communication Engineering

Rajiv Gandhi University of Knowledge Technologies

08/2022 - 05/2026 | Ongole

Pre-University Course

Rajiv Gandhi University of Knowledge Technologies

08/2020 - 05/2022 | Ongole

High Schooling

Z.P. HIGH SCHOOL

08/2016 - 05/2020 | Kondur

PROJECTS

Image Classification Using TensorFlow

11/2024 - 12/2024

Image Classification Using TensorFlow

- Developed a Convolutional Neural Network capable of accurately classifying images into 24 categories of fruits and vegetables.
- Utilized chatgpt for coding assistance
- Implemented pre-processing pipelines and trained models to achieve 95% accuracy on the test dataset.

Self-Driving Car

07/2024 - 10/2024

Self-Driving Car Development

- Built and tested an autonomous vehicle in virtual world using ROS2 and Gazebo.
- Controlled the car based on road edges and obstacles using real-time processing.
- Executed extensive simulations for environment mapping and safe navigation.

Self-Balancing Robot

03/2024 - 05/2024

Self-Balancing Robot

- Designed and developed a two-wheeled robot leveraging PID control for real-time stabilization.
- Integrated gyroscopic and accelerometric sensors for dynamic balance.
- Conducted iterative testing and debugging for optimal performance.

Drone Development Project

11/2023 - Present

Drone Development Project

- Designed the UAV with custom hardware for sensor input and motor control.
- Conducted initial PID tuning trials to improve flight stability.
- Demonstrated strong understanding of robotics hardware and software integration.

KEY ACHIEVEMENTS

2nd Place: NXP AIM Competition

Designed and simulated a self-driving car with camera and LiDAR integration, recognized for innovation and performance.

2nd Place: ROBOTRAC Competition

Built and programmed a high-accuracy line-following robot utilizing HuskyLens and Arduino.

SKILLS

Algorithms | Arduino | Data Structures | Debugging | Git | GIT Version Control | Github | IoT | keras | Linux | Matlab | Microcontroller | Neural Networks | OpenCV | PCB | PCB Design | Python | Robotics | Tensorflow

PASSIONS

Robotics Club Activities

Active member of the Robotics Club, leading workshops on Arduino programming, IoT, and robotics.

Extracurricular Contributions

Regular participant in robotics competitions and hackathons, focusing on innovative robotic system design.