

Paritosh Hattayangdi

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"Innovative Engineer focused on applying advanced solutions in real-world robotics and automation."

EDUCATION

MS, Robotics and Autonomous Systems (Electrical) Engineering

December 2024

Arizona State University, Tempe, AZ

Coursework: Mechatronics Systems, Robotic Systems I, Computing with Python, Embedded Systems, Connected and Automated Vehicles

BE, Electronics Engineering

May 2022

Vidyalankar Institute of Technology (VIT), Mumbai, India

Coursework: Signals & Systems, Power Electronics, Digital Communication, Engineering Mechanics, Robotics, EDC I & II

WORK EXPERIENCE

Robotics Engineer, EntreVita Inc., Remote

Feb 2025 – Present

- Conduct R&D, contributing to at least one major project and report or present the findings
- Design, build, and test at least one functional robotic prototype, incorporating mechanical, electrical, and software components, utilizing ROS, Gazebo, MoveIt
- Develop and optimize machine learning models, improving performance metrics by at least 10% in accuracy

Math Course Technical Assistant, EdPlus at ASU, Remote

July 2023 – Dec 2024

- Working alongside ASU Instructional Designers, enhancing team efficiency & accelerating feature releases by 30%
- Providing support to leadership in performing competitive testing and analysis for cutting-edge Ed-Tech products
- Decreased student error rate by 33% on math problems aligned with AZ state standards through tool development
- Developed detailed design documentation and utilized JIRA and Airtable to optimize the workflow

R&D Intern, Sourcewell Devices Pvt Ltd., Mumbai

Dec 2021 – Jan 2022

- Leveraged expertise in semiconductor device physics to perform data analysis on voltage regulators & microcontrollers according to the project and stakeholder requirements, with a cross-functional team
- Developed, maintained, & standardized evaluation processes, protocols, test cases of various components
- Led the review of 1.6K product entries in 30 days, restoring 15+ products daily and improving data accuracy

Robotics Intern, VYORIUS, WFH

Sep 2021 – Nov 2021

- Conducted kinematic and structural analysis of various robotic systems including Puma, 3R, SCARA, Gantry, and 4R robots using RoboAnalyzer and C programming, ensuring precise determination of end effector positions
- Conceptualized and documented forward kinematics, dynamics, and work envelopes for robotic systems, enhancing product development and design specifications
- Designed and executed multimedia marketing campaigns for a robotics internship workshop, increasing student participation by 35% and engagement by 50%, demonstrating strong communication and promotional skills

ACADEMIC PROJECTS

Supporting the AV-TEP Mission, Scenario Based Testing Pillar, Scenarios Team, ASU/ACA, Tempe

Fall 2023

- Evaluated system design improvements for robust autonomy, ensuring complex traffic scenarios were handled effectively, and collaborated with the project sponsor from NHTSA to ensure the system could effectively handle diverse traffic scenarios
- Utilized the CARLA simulator to accurately mimic and analyze 37 pre-crash scenarios curated by the National Highway Traffic Safety Administration (NHTSA), enhancing simulation accuracy and reliability
- Developed a methodology for quantifying safety in automated driving systems, focusing on analyzing responses to simulated pre-crash scenarios, analyzing the data collected during simulations to identify potential risks and inform the development of strategies to enhance system safety and reliability

Object Detection, Distance Measurement, & Path Planning for Autonomous Ground Vehicles

Fall 2022

- Implemented object localization: YOLOv3, distance measurement: stereoscopy, & path planning: Python & OpenCV
- Collaborated in a cross-functional group to integrate SLAM and RRT algorithms, and simulated using Gazebo (ROS)
- Employed in a stereo camera system taking an average time of 6.5ms per frame including drawing the bounding boxes and classifying the objects and distances, increasing the accuracy by 12%

SKILLS

Proficiency in Python, Arduino, C, Matlab and Simulink, Robotic testing and debugging, Knowledge of advanced algorithms for autonomous navigation for single systems as well as multi-robot systems, Oscilloscopes, Power Supply, Function Generator, Soldering, Breadboards, Drawing and Checking Electrical Schematics, familiarity with LTSpice, KiCAD, SolidWorks, SLAM, ROS, Focused, Customer—Driven, Effective Inter—Personal Communication Skills, Team Player