ASHWIN SAXENA

U.S. Citizen • (989) 615-5185 • ashwinsa@umich.edu

EDUCATION

University of Michigan College of Engineering Ann Arbor, MI

B.S.E. in Computer Science GPA: 3.947/4.0 December 2022

- Relevant Courses: Data Structures & Algorithms, Machine Learning, Computer Vision, Autonomous Robotics

M.S. in Electrical and Computer Engineering: Robotics December 2023 (Expected)

- Pre-admitted

WORK EXPERIENCE

Amazon.com Seattle, WA

Software Development Engineering Intern - Sagemaker May 2022 - August 2022

- Developed a command line interface (CLI) query engine using Python that would help reduce AWS region build times by at least 5%
- Integrated libraries like Pandas, Numpy, Jupyter, and Graphviz with AWS Region Build APIs to visualize and format data in a concise and presentable way
- Implemented multithreading to reduce query time by more than 500%, improving the efficiency of the CLI usage for product managers

Principal Financial Group Des Moines, IA (Remote)

Software Engineering Intern May 2021 - August 2021

- Developed back-end web applications in Java and REST services employing DevOps practices and collaborated in an Agile team using the SCRUM framework
- Utilized the Elastic (ELK) stack to enable event-driven system logging and wrote unit tests and automation scripts
- Handled enterprise data using SQL in IBM DB2 under the Master Data Management discipline to provide a more holistic view of the various databases

Michigan State University St. Andrews Midland, MI

Autonomous Vehicle Research Intern June 2019 - August 2019

- Designed and constructed autonomous model cars using supervised machine learning and Keras API, enabling cars to drive on a painted track with no human input with a 98% accuracy
- Analyzed different sensors and incorporated them into neural networks to make a more stable autonomous car that could avoid objects
- Presented findings of research through poster at open house event to community members

PROJECT EXPERIENCE

University of Michigan Autonomous Robotic Vehicle Student Team Ann Arbor, MI

President, Navigation Lead September 2020 - Present

- Leading a team of 60 members in the development of an autonomous robotic vehicle for the 2023 Intelligent Ground Vehicle Competition at Oakland University
- Managing relations with the university, advisors, and sponsors, to recruit new members and grow the organization
- Developed onboarding projects to teach new members the basics of navigation, ROS, and software stack used
- Programmed the navigational stack for autonomous driving using ROS on Linux through virtual simulations and hands-on mobile robots

UM Multi Legged Robots and Animal Motion Research Team Ann Arbor, MI

Electrical Team January 2021 - Present

- Refactored and improved upon 10-year-old code to use the updated ROBOTIS Dynamixel Protocol 2.0 that would allow the team to use new motors in multi-legged robots