Michael ELROD

COMPUTER SCIENTIST - AI ENTHUSIAST - BACHELORS TO MASTERS STUDENT

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RESEARCH SUMMARY

A proficient programmer with knowledge in Cloud Computing and Web/Mobile Application Development, delving into the fields of Autonomous Systems and Vehicles. Currently completing a bachelor's in computer science and envisioning a master's thesis in Computer Vision, Artificial Intelligence and Machine Learning to apply these technologies in practical scenarios. Keen on exploring innovative solutions, blending current expertise with AI and ML concepts, and contributing to collaborative R&D ventures to advance the frontier of autonomous technologies.

ACADEMIC HISTORY

CLEMSON UNIVERSITY
Clemson, SC

B.S. IN COMPUTER SCIENCE – GPA 3.5
Aug 2021 - May 2025

TECHNICAL SKILLS

LANGUAGES & TOLLS

PYTHON, C++, C, JAVA, HTML/CSS, SCIKIT-LEARN, MATPLOTLIB, AWS, REST API, GIT, SELENIUM, FLUTTER, JIRA

RESEARCH PROJECTS

AUTONOMOUS DRONE POLLINATORS
Sep 2023 - present

Partnering with a graduate student for a university-funded research project to explore the use of autonomous drones for identifying and pollinating flowers, leveraging AI and ML technologies in Python

AI & MACHINE LEARNING
Jan 2023 - present

Exploring various machine learning paradigms including supervised, unsupervised, and reinforcement learning, alongside model evaluation, using Python and data visualization libraries

CLOUD COMPUTING & API
Aug 2022 - present

Collaborated on a RESTful API for an app's review section, using JavaScript, and hosted on AWS. Deployed and monitored cloud infrastructure on AWS, using non-relational databases, Lambda functions, and AWS CLI

USER-FOCUSED SOFTWARE
Aug 2021 - May 2023

Designed and implemented two custom 2D game engines utilizing C++/Lua and Python. Developed my website to exhibit my portfolio, employing JavaScript, HTML/CSS, and Firebase to automate updates via GitHub

WORK EXPERIENCE

CLEMSON UNIVERSITY
Clemson, SC

STUDENT RESEARCHER
Sep 2023 - present

- Partnering with a graduate student for a university-funded research project to explore the use of autonomous drones for identifying and pollinating flowers, leveraging AI and ML technologies in Python
- Utilizing MATPLOTLIB to create a simulation to visualize drone activity and flower clusters in a field, aiding in data analysis and project presentation
- Aiming to integrate computer vision technology to transition the project from simulation to real-world drone applications

NAVAL INFORMATION WARFARE CENTER (NIWC)
Clemson, SC

STUDENT SOFTWARE DEVELOPER
Jan 2023 - present

- Collaborating with NIWC and the Blue Ridge Innovation & Entrepreneurship Foundation (BRIEF) to create a STEM-focused educational mobile app, aimed at providing local students from low-income families, who may lack technological resources, with an accessible learning platform
- Engineering the backend API for the application and admin portal using AWS CLI, AWS SAM, TypeScript, and Postman
- Designed the frontend mockup of the application using Figma in collaboration with BRIEF

BLUECROSS BLUESHIELD SC (BCBSSC)
Columbia, SC

INTERN SOFTWARE DEVELOPER
Aug 2023 - Aug 2023

- Worked on the Contact Center Technology team creating and maintaining new features for their clients' contact centers using Java and other proprietary software
- Developed a Python script to identify and delete unused objects from the company's database, resulting in enhanced system performance through reduced memory usage