Avery Fernandez, Software Engineer

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SUMMARY

Research Assistant and Programmatic Data Analyst with 2 years of experience in Python, Machine Learning, and AI. Deep understanding of data analysis, modeling, and software engineering. Skilled in designing, developing, and deploying data-driven solutions.

EXPERIENCE

Lead Instructor
iD Tech   **June 2023 – July 2023, Birmingham, Alabama**

· Assisted the Camp Director with running a summer camp by providing technical support, motivating staff, fostering a safe and fun environment, and performing administrative tasks.
· Role model for the team, supervising students, leading activities and games, and ensuring safety.
· Led 7 to 10 students through an intensive 4-week introduction to programming course designed to teach the fundamentals of programming.
· Supervised up to 30 students at a time, maintained a safe environment, dispensed camper medications with 100% accuracy, maintained up-to-date health logs, responded to and documented critical incidents, and administered CPR and First Aid as needed.

Intern
Fanaticus XR   **October 2022 – July 2023, Atlanta, Georgia**

· Developed and maintained 3D and VR servers and technology within a team of 3 developers.
· Rapid prototyping of app design ideas by developing apps in 5 days, used as a demonstration of ideas.
· Conducted quality assurance testing for app releases by performing manual tests, resulting in improved product performance and identifying 20+ bugs.
· Documented new ideas, and created a database of potential features and games with 20+ ideas.

Research Assistant and Programmatic Data Analyst
UA Library   **October 2021 – Present, Tuscaloosa Alabama**

· Covered a wide range of topics including network analysis, API calls, data manipulation, graphic visualization, machine learning, and Optical Character Recognition (OCR).
· Collaborated with professors and academic departments on various research projects to collect, clean, and analyze data to provide academic departments with data-driven recommendations for academic and programmatic planning.
· Led programming courses on High-Performance Computing (HPC) networks, Unix, Microcomputers, Network Analysis, and Machine Learning/AI, teaching over 100 students each year.
· Developed and deployed full-stack applications for the University of Alabama, including an AI chatbot, dashboard, cookbook, and Python backend.
· Authored 2 research papers on the network analysis of molecular similarity and scholarly cookbook generation using the Python programming language.

Avionics Leader
Alabama Rocketry Association   **September 2022 – May 2023, Tuscaloosa Alabama**

· Led teaching sessions on soldering, wiring diagrams, electrical wiring, and programming.
· Reduced the total payload weight by 30% by simplifying the electrical system with a custom flight computer and developing a self-orienting payload capable of decoding data transmissions from ground control.
· Improved avionics integration process from end-to-end to increase efficiency by 20% by creating a repeatable process with test procedures.
· Designed, implemented, and tested a system for a camera to track the rocket flight, calculate rocket location, and transmit the data to a ground station.

EDUCATION

Bachelor of science in Computer science
University of Alabama at Tuscaloosa · US, Alabama, Tuscaloosa · 2025

SKILLS

Technical Skills: Python, TensorFlow, Pytorch, Unix, Linux, Virtual Environments, System Design, Artificial Intelligence Integration, Network Analysis, API Calls, Restful Api, Data Manipulation, Graphic Visualization, Machine Learning, Optical Character Recognition, In-person Lecturing, Research, 3D, VR, Market Research, Rapid Prototyping, Teaching, Soldering, Wiring, Schematic Wiring, Electrical Wiring, Hardware Integration, C++, Web Development, Html Css, Javascript, Tesseract, Git, Rest APIs, Gaming, Content Creation, ML, Java, Aws, Apache