Eric Pedley

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Education

University of California, Irvine   September 2021 - Spring 2025 (Expected)
GPA: 3.95 | B.S. Computer Science

Skills

Languages: Python, C++, C, TypeScript, JavaScript, HTML, CSS, Assembly, Java
Frameworks/Libraries: OpenCV, PyTorch, Numpy, TensorFlow, scikit-learn, Node.js, React, Flask
Other Technologies: Git, (Arch) Linux, Bash, AWS, Firebase, Vercel, MongoDB, PostgreSQL, Heroku

Experience

Software Development Engineering Intern | AWS   Minneapolis, MN | June 2022 - September 2022
Designed and built a distributed cloud-native data pipeline to aggregate AWS region build statuses.
Coding Instructor | CODE FOR FUN   Los Altos, CA | June 2021 – Present
Lead web development and robotics camps and tutored students in game development and data science with Python.

Extracurriculars

UAV Forge Imaging Team   September 2022 - Present
- Wrote a muti-label deep learning object detector from scratch and a synthetic data generator to train it on
- Employed profiling to identify performance bottlenecks and fixed them, cutting our memory usage in half.
- Designed end-to-end tests for our entire software pipeline, leading to less time fixing software bugs on flight days.
- Wrote algorithms to track coverage of the target search area and localize detected objects
- Developed expertise in PID tuning and sensor filtering for the drone.

AntAlmanac Tech Lead   November 2021 – Present
- Led a team of 9 students in enhancing UCI's schedule planner website (AntAlmanac), which is used by 45k students.
- Reviewed team members' code, ensuring adherence to code quality standards and best practices.
- Single-handedly migrated the website to TypeScript, enhancing maintainability and scalability.

Undergraduate Researcher   October 2021 – April 2022
- Improved the accuracy of a glaucoma surgery outcome prediction ML model from 60% to 80%.
- Conducted experiments to find the best model architecture and used classical computer vision methods to augment the model.

Projects

Dining Hall App ↗   PYTHON, FIREBASE, SERVERLESS
- Led the development of a popular dining hall app with over 1000 downloads on the app store, setting up backend caching and testing to ensure speed and reliability
- Recruited and managed a team of students to port the app to multiple platforms, ensuring cross-platform availability.
- Provided guidance and advice to the team, leveraging my expertise to make strategic decisions, create roadmaps, and foster effective communication.

Computer Vision Game Bot ↗   C++, OPENCV
- Developed a computer vision game bot utilizing Windows APIs, template matching, and geometry techniques to achieve superhuman scores in an online game
- Self-taught C++ to rewrite my originally Python-based bot, achieving 10x faster runtime and improved performance
- Received recognition from the game's creator for the initiative and creativity in developing the bot.

Open Source Contributions ↗   JAVASCRIPT AND PYTHON, SKLEARN
- Patched a bug in the official YOLOv8 repository that prevented users from exporting models with custom batch sizes
- Submitted and successfully merged a pull request to an auto ML library with over 6k stars on GitHub, addressing a bug and improving the library's performance.
- Contributed to an open-source Chrome extension with a user base of over 50k by fixing a critical issue and enhancing its functionality.