Aaron Gee

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Project Experience

Fire Detection Drone

Prototyped low-cost semi-autonomous aerial drone with fire detection capabilities using Python.

Developed the drone's fire detecting program using **OpenCV** to combine **traditional image processing techniques** and **thermal imagery** to accurately identify the presence of fires with low latency and power consumption. **Communicated software-oriented ideas** and **delegated equal project responsibilities** with teammates to more efficiently develop better prototypes.

Ride Organizing Application

Created a web-based ride organizing application using HTML, CSS, Javascript, & React for the frontend, and NodeJS for the backend. Application supported user authentication with Auth0 and saved events, rides, drivers, and passengers with MongoDB.

Raspberry Pi HVAC Simulator

Designed a "HVAC simulator" using a **Raspberry Pi 5** and various external sensors. External sensor components would send **temperature**, **humidity**, **and motion** data to the RPi, which would then output a display composed of **LEDs** and a **LCD**.

Project Portfolio Website

Developed a personal portfolio website using HTML, Javascript, React, and Tailwind. Website supports safe page routing using React Router and a real-time changelog using GitHub Apps.

Education

Computer Science and Engineering, B.S. (Oct 2020 ~ June 2024) | *University of California, Irvine* GPA 3.347

Relevant Courses

Programming	Embedded Software, Data Structures, Algorithm Analysis & Design, Systems Engineering,
	Internet Applications Engineering, Computer Networks, Principles of Operating Systems
Math	Multivariable Calculus, Linear Algebra, Differential Equations, Boolean Logic, Discrete Mathematics
Computer Engineering	Digital Systems & Logic, Organization of Digital Computers, Network Analysis
Others	Professional Communication

Skills

Computer Languages: Python, C++, Java, C, Assembly, JavaScript, HTML, CSS, Verilog

Tools/Frameworks/ Eclipse, VIM, PyCharm, IntelliJ, Visual Studio, Notepad++, Vivado, GitHub,

Libraries: React, OpenCV, Vite, TailwindCSS

Microprocessor Board: TM4C123 Tiva Launchpad, Raspberry Pi

Soft Skills: Communication, Teamwork, Creativity, Curiosity, Patience