Simon Dao

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Education

University of Washington Exp Grad. Spring 2025
Bachelor of Computer Science, Minor in Data Science *Cumulative GPA 3.7/4.0*

Technical Skills

Languages: Java, Python, C, C++, ARM Assembly, SQL, JavaScript, HTML/CSS
Frameworks: React, Node.js, Flask, JUnit, Material-UI, FastAPI, Arduino, ROS
Developer Tools: Google Cloud Platform, AWS, Git, Docker, VS Code, Visual Studio, PyCharm, IntelliJ, Figma
Libraries: Pandas, NumPy, Matplotlib, OpenCV

Experience

Vice President / Web Developer December 2022 – Present
Association for Computing Machinery Club (ACM)
- Planned and orchestrated multiple events that had over 300+ participants
- Hosted technical interview prep sessions to help students practice solving data structure and algorithm problems
- In charge of recruiting and training 20+ new officers
- Redesigned and updated 5 pages on the club website

Data Science Intern January 2023 – June 2023
University of Washington Office of Admissions
- Redesigned and implemented 2 web portals used by students and faculty via **HTML, CSS, and JavaScript**
- Spotted and fixed 700+ inconsistencies in student records in the student database
- Compiled 50+ reports on student data for admissions officers and other admissions staff

Programming Instructor June 2023 – September 2023
ID Tech Camps
- Taught 30 children ages 9 - 16 technical skills such as **Java, Python, C-Sharp, OpenXR, and Unity**
- Played a pivotal role in orchestrating camp events and managing inventory

Data Science Intern / Teaching Assistant March 2022 – June 2023
Computing for All
- Developed and taught lessons on web development fundamentals to cohorts of 20 students
- Provided personalized academic support to students during office hour sessions
- Used **JavaScript and REST APIs** to automate the attendance-taking system for virtual class meetings, saving each instructor 20+ minutes a day of manual work
- Redesigned the student database schema to accurately and efficiently store information for 200+ student records

Embedded Software Engineer March 2022 – June 2023
Trickfire Robotics Club
- Embedded an **OpenCV** application written in **Python** onto a single-board computer to control an aerial drone autonomously
- Worked on a web app that sends commands to the competition robot and displays telemetry data working with **HTML, CSS, JavaScript, and Robot Operating System (ROS)**

Projects

Bluetooth Controlled Robot Arm | *3d Printing, c++, Arduino*
- Created a robot arm controlled via a Bluetooth controller)

Automated Sentry Turret | *Raspberry Pi, 3D Printing, OpenCV, Python, Socket-IO*
- Conducted experiments with **Raspberry Pi and 3D printing** to construct a face-tracking turret
- Integrated **OpenCV** for facial recognition on the Raspberry Pi
- Developed a **Python** program with **PID** controllers for servo motors to achieve smooth and precise face-tracking
- Established a remote control mechanism using **Socket-IO**, enabling operation from a connected computer

Note-taking Web App | *React, Express.js, MongoDB, Node.js*
- Developed a personalized notebook application utilizing the MERN stack (MongoDB, Express.js, Node.js, React)

Pathfinding Algorithm Visualizer | *JavaScript, React, Algorithms, AWS*
- Created a **React** application to visualize path-finding algorithms on a grid
- Implemented algorithms such as Djikstra, BFS, DFS, and A-Star
- Hosted the **React** front-end via **S3 bucket** and **Node.js** back-end via **EC2 instance**