

Summer Cai

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EDUCATION

California Polytechnic State University, San Luis Obispo

Bachelor of Science in Computer Engineering, Minor in Statistics, Jun. 2025

GPA: 3.6/4.0, Dean's List

- Relevant Coursework: Data Structures, Algorithms, Object-Oriented Programming, Statistics, Systems Programming, Computer Architecture, Database Systems, Microcontrollers and Embedded Applications

SKILLS

Programming Languages: Javascript, Python, C++, C, Java, HTML, CSS, SQL

Frameworks/ Tools: React, Flask, VSCode, IntelliJ, Git, Jenkins, JIRA, NoSQL, Agile Development/Scrum, Linux

EXPERIENCE

Western Digital - Irvine, CA

Embedded Software Development Engineering Intern, Jun. 2024 – Sept. 2024

- Developed automated test frameworks for embedded firmware, integrating with Continuous Integration (CI) pipelines to ensure high-quality and efficient firmware releases.
- Collaborated with cross-functional teams to identify critical test scenarios and created Python scripts to automate testing, significantly reducing manual testing time.
- Designed and implemented complex data path algorithms and hardware drivers, adhering to industry protocols and maximizing hardware-software integration.

Suntender Valuations - Pleasanton, CA

Software Engineering Intern, Jun. 2023 – Sept. 2023

- Actively engaged in the end-to-end software development process, including design, code reviews, testing, API documentation, and bug resolution.
- Led the design and execution of machine learning experiments, evaluating model performance using Python and machine learning libraries.
- Integrated ML algorithms into production systems, collaborating with teams to optimize software performance and extend functionality based on analytical insights.

Prototype Vehicles Laboratory - San Luis Obispo, CA

Low Voltage Engineer, Jun. 2023 – Present

- Collaborated on the front-end development for the vehicle control system interface, enabling operators to interact seamlessly with low-voltage systems.
- Implemented real-time data visualization features to monitor and display vehicle metrics, improving usability and operational efficiency.

PROJECTS

Caltrans Vehicle Detection

- Built a machine learning-powered system using YOLOv5 to count vehicles from Caltrans camera feeds, providing real-time detection directly in the browser without server-side processing.
- Optimized the system to handle multiple camera feeds in real-time, enhancing scalability and providing traffic operators with live data to improve traffic flow management and safety.

Restaurant Recommender | <https://summer-cai.com/restaurant-recs>

- Developed a full-stack web application that provides restaurant recommendations based on user input, integrating the Yelp API to pull real-time restaurant data and provide relevant recommendations with similar price points and cuisine.
- Implemented form handling using Javascript and a Flask backend to handle user queries and displayed results in an interactive interface, improving overall user experience.

Amazon Price Tracker | <https://summer-cai.com/price-tracker>

- Developed a web application enabling users to track Amazon product prices and receive email notifications when prices fall below a user-defined threshold, utilizing web scraping techniques to extract real-time price data for accurate alerts.
- Built RESTful API endpoints using Flask to handle user interactions, including product tracking and price management, integrating PostgreSQL for persistent storage of user preferences, tracked products, and notification statuses.