Aaron Sharif

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EDUCATION

University of California Santa Cruz — Santa Cruz, CA
Bachelor of Science in Computer Science — *Sept. 2022 – June 2026*
- **Relevant Coursework:** Data Structures and Algorithms, Discrete Mathematics, Object Oriented Programming in Python, Machine Learning Basics, Computer Architecture

EXPERIENCE

Software Engineering Fellow — July 2024 – September 2024
HeadStarter AI — *Remote*
- Developed and deployed an AI travel planner using **React.js**, **Gemini**, **OpenAI API**, and **Firebase**, which served over **1,000** users and reduced itinerary planning time by **50%**.
- Implemented a **CI/CD pipeline** using **Jenkins** and **Docker**, automating the deployment process for the AI travel planner, which reduced release time by **40%** and minimized deployment errors by **30%**.
- Analyzed user engagement metrics and optimized the AI travel planner's recommendation algorithm, leading to a **25%** increase in user retention.

Software Engineering Intern — June 2024 – August 2024
CodeDay Labs — *Remote*
- Collaborated with a team to enhance the **Leaflet JavaScript library** by **30%**, resolving critical issues and improving performance by optimizing rendering processes and implementing data clustering techniques.
- Utilized **CI/CD pipelines** to automate testing, integration, and deployment, ensuring consistent and reliable updates to the **Leaflet** library.
- Developed and executed unit tests using the **Chai** library in conjunction with **Mocha**, increasing code coverage by **25%** and ensuring robust functionality across key features of the **Leaflet JavaScript library**.

Computer Science Tutor — January 2024 – June 2024
Baskin School of Engineering — *Santa Cruz, CA*
- Tutored over **200** students in courses such as **Computer Systems**, **Assembly Language**, **Foundations of Game Design**, and **Linear Algebra**.
- Developed and modified **30+ Python and Bash** grading scripts to automate the grading of students' labs and projects, reducing runtime by **31%** and improving overall assessment accuracy.
- Facilitated weekly office hours to assist students with projects, lab assignments, and theoretical concepts, resulting in a **15%** average increase in assignment scores for attendees.
- Held workshops covering programming concepts in **MATLAB**, **HTML**, **CSS**, **JavaScript**, **Python**, and **RISC-V**.
- Created project presentations and **Git** guides as resources for student projects and homework assignments.

PROJECTS

URL Analyzer | *React, HTML/CSS, Node.js, Express.js, MongoDB* — August 2024 – Present
- Built a full-stack web scraper that allows users to scrape data and perform browser-like interactions on any webpage, automating the extraction of information and enabling advanced web automation tasks.
- Developed a responsive frontend using **React.js**, enabling users to input URLs, select actions, and interact with web pages via a dynamic form interface.
- Engineered a robust backend with **Node.js** and **Express**, integrating **Puppeteer** to perform headless browser automation for web scraping and simulating user interactions such as clicks and form submissions.
- Implemented **MongoDB** for efficient data storage, utilizing **Mongoose** for schema management, data validation, and creating indexes to optimize query performance.

AI Flashcard Generator | *Gemini, React, Firebase* — July 2024
- Designed and developed an AI-powered flashcard generator with a **React** frontend, providing a seamless and interactive user experience.
- Integrated **Firebase** for efficient backend operations, enabling real-time data storage and retrieval.
- Leveraged **Gemini** to generate high-quality flashcard content, tailored to user input.

TECHNICAL SKILLS

Languages: Java, Python, C/C++, SQL (PostgreSQL), JavaScript, HTML/CSS, Go, RISC-V
Frameworks/Libraries: React, Node.js, Flask, JUnit, Material-UI, FastAPI, pandas, NumPy, TensorFlow, Sci-kit Learn, Express.js, Firebase, OpenAI API, gemini
Tools: Git, Docker, Jenkins, TravisCI, Google Cloud Platform, VS Code, PyCharm, IntelliJ, Eclipse, Kubernetes