

# Brooke Mattos

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## EDUCATION

### University of California, Santa Cruz

Computer Science B.S.

Expected Graduation: June 2026

GPA: 3.8

Relevant Coursework: Full Stack Web Development, Database Systems, Distributed Systems, Computer Networks, Computer Systems, Machine Learning, Artificial Intelligence, Technical Writing, Data Structures & Algorithms

## TECHNICAL SKILLS

**Languages:** Python, JavaScript, TypeScript, Java, C, C++, C#, HTML/CSS, SQL, Bash

**Frameworks:** React, Angular, Next, Node, Express, Jest

**Technologies:** Git, Unix, Linux, Vim, Unity, REST, APIs, AWS, Postgres, Firebase, Docker, DynamoDB

**Tools:** GitLab, Jira, Figma, Confluence, Postman, Swagger, LaTeX, Excel, Agile/Scrum

## EXPERIENCE

### Software Engineering Intern | Second Dinner

June 2025 - September 2025

- Contributed to backend development on **Marvel SNAP**, a market-leading PC & mobile card game with **30M+ downloads**, ensuring stability and efficiency in a live-service environment.
- Built and optimized in-game systems in **C#** and **Unity**, leveraging **AWS Lambda** & various **SaaS tools**, enhancing analytics, improving player experience, and reducing crash-rates by **25%** via memory profiling.
- Collaborated with a **30-person** cross-functional team on the design and development of a new game-mode infrastructure and new mode from scratch, improving code re-usability, optimizing overhead, and facilitating improved player **engagement & spend**, with a projected **7% uplift** in retention between event cycles.
- Developed automation pipelines with **GitHub Actions** and various **REST APIs**, leveraging **Slack APIs** to accelerate communication and development turnaround, while reducing live-server hotfix latency + surface area, and improving our **CI/CD pipelines**.

### Lead Full Stack Developer | Tech4Good Lab

January 2025 - Present

- Develop & maintain full stack **Angular** web applications with **Firebase** to support large-scale, AI-driven social impact and education research initiatives.
- Core developer on **Causeway**, an educational programming platform with **200+ users**, collaborating with researchers and engineers in **agile scrums** to manage issues and deliver critical features efficiently.
- Lead** across our skill-building web dev teams, mentoring **15+ developers** a quarter in our tech stack, serving as a **group tutor** for the course, while driving code reviews, technical guidance, and sustainable workflows.

## PROJECTS

### GuitarBase | [demo](#) | [link](#) | *JavaScript, React, Firebase, HTML, CSS*

June 2024 - Present

- Develop a **full-stack web application** for guitar players, featuring a playable fretboard, a personalized learning & song tracking system, accompanied with a range of other critical tools.
- Employs **Firebase** authentication and databases for user-specific data storage, enabling seamless management of personal libraries, user preferences, and learning progression.

### Multi-Threaded HTTP Server | *C, Linux*

April 2024

- Constructed a highly concurrent, multi-threaded HTTP server utilizing POSIX threads for synchronization, optimizing request handling and resource allocation.
- Implemented advanced concurrency control mechanisms, ensuring thread safety and minimizing race conditions, improving server efficiency under high load.

### Solvoku | [demo](#) | *Python, OpenCV, Tensorflow, Keras*

June 2023

- Designed a Sudoku application with a GUI, engineering an efficient board solver that utilizes a backtracking algorithm to solve boards in less than **100 ms**.
- Implemented an end-to-end image processing pipeline, using the OpenCV library to analyze pictures of boards, resulting in accurate isolation and solution of Sudoku puzzle grids.