

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 Engineer | Crusoe

Incoming June 2026

- Incoming new grad software engineer, building a new **cloud infrastructure** from the ground up, working at the forefront of distributed system technologies.
- Collaborating with other engineers to build and maintain scalable and highly available fault-tolerant **distributed systems at scale**, build products and tools from the ground up that will be used by customers around the world, triage bugs and solve issues in production, and work with product owners and other stakeholders to iterate on new features.

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.