

# NEO SUD

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## EDUCATION

**University of California, Santa Cruz**

**Santa Cruz, CA**

Bachelor of Science, Computer Science

Sep 2023 – Jun 2026

- **Cumulative GPA: 3.96/4.0**
- **Relevant Coursework:** *Applied Machine Learning, Artificial Intelligence, Computer Architecture, Data Structures, Systems Design, Databases, Analysis of Algorithms, Programming Languages*

## EXPERIENCE

**Software Engineering Intern**

**Jun 2025 – Sep 2025**

CrowdStrike

*Sunnyvale, CA*

- Built a unified CLI for 30+ malware classifiers, optimizing internal model testing and deployments.
- Moved microservices to a monorepo, cutting bug tickets by 40% via centralized version control tools.
- Automated Python (UV) pipelines to ensure high build reproducibility across all cloud environments.
- Optimized Jenkins CI/CD pipelines, boosting build and runtime performance by a factor of up to 4x.

**Data Engineering Researcher**

**Mar 2025 – Jan 2026**

UCSC Genomics Institute

*Santa Cruz, CA*

- Architected AWS S3 pipelines to process 25+ datasets, managing extraction of 63M+ embeddings.
- Scaled KNN/Louvain clustering, reaching 91% accuracy for a novel high-resolution tumor cell atlas.
- One of 27 national groups selected to present technical findings at the NCI ITCR 2025 Symposium.

**Full-Stack Research Fellow**

**Apr 2024 – Sep 2025**

Tech4Good Lab

*Santa Cruz, CA*

- Awarded a \$6,000 NSF REU to conduct HCI research under the direction of Professor David Lee.
- Architected an ML Platform for 200+ users; first-authored research for CHI '26 and IUI '26.
- Optimized backend logic using Dawid-Skene EM, increasing system processing efficiency by over 40%.
- Engineered a RAG service utilizing 50+ expert datasets to boost automated response accuracy levels.

**Lead Software Engineer**

**May 2024 – Aug 2024**

SlugAI

*Santa Cruz, CA*

- Directed development of 10+ interactive math animations using Python for SlugAI's educational initiative.
- Mentored 25+ students in Python and deep learning fundamentals through weekly sessions.
- Coordinated campus events featuring industry professionals (300K+ cumulative reach).

## PROJECTS

**SudGPT | Next.js, GPT-5-nano, ElevenLabs, Tailwind CSS**

- Built a digital persona app with a glassmorphic UI using Next.js 16, React 19, and Radix UI tools.
- Fine-tuned gpt-5-nano on iMessage data to replicate professional style with OpenAI safety filtering.
- Integrated ElevenLabs API for low-latency voice synthesis with custom-built audio player modules.

**Yardbird | TypeScript, Next.js, LangChain, Pinecone**

- Built a scalable search service using Pinecone and LangChain, cutting query latency by nearly 15%.
- Developed reusable Next.js UI components for a high-performance musician discovery web interface.
- Shipped a production-ready MVP in 6 weeks for the Buildspace nights and weekends global challenge.

**Soshal | Flutter, Firebase, Google Cloud Platform (GCP)**

- Architected a cross-platform social application for club management using Flutter and Firebase.
- Implemented backend microservices on GCP to ensure real-time data synchronization and scalability.
- Successfully deployed the application for the Google Student Developer Challenge (2024).

## AWARDS/SKILLS

**Programming Languages:** Python, C++, C, SQL, TypeScript, Java, Dart, HTML/CSS, Bash

**Awards:** NSF REU in Computing (2024), Dean's Research Award (2025), Dean's Honor List (6x, 2023-2025)

**Technologies:** Docker, Kubernetes, UV, Jenkins, AWS, Firebase, Flutter, GCP, Pinecone, Unix/Linux, Git