HUNTER NGUYEN

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EDUCATION

San Jose State University **Expected Graduation: May 2026**
Bachelor of Science in Computer Science | GPA: 3.8 *San Jose, CA*

- **Coursework**: Data Structures/Algorithms, Object-Oriented Design, Intro to Computer Systems, Discrete Math
- **Organizations**: Software and Computer Engineering Society (Officer), Mozilla Student Ambassador

EXPERIENCE

San Jose State University Sept. 2024 – Present
Undergraduate Researcher *San Jose, CA*

- Developed custom constraint-embedding layer to validate constraints within engineering designs using PyTorch.
- Created architecture for constraint-aware generative design, enabling verification of design constraints.
- Drafting publication with Dr. Yunjian Qiu (Mech. Eng.) to be presented at **ASME IDETC-CIE 2025** Conference.

SJSU College of Engineering Sept. 2024 – Present
Software Engineer *San Jose, CA*

- Implemented tool calling with LangChain for school Discord bot to call various services using natural language.
- Utilized FastAPI and Groq's API for advanced NLP capabilities, enabling seamless integration of AI into bot.
- Optimized API performance by implementing asynchronous processing, reducing response times by 20%.

theCoderSchool Jun. 2024 – Present
Coding Instructor *Los Gatos, CA*

- Mentored 10 students in Python and Java with project-based learning, tailoring lessons by different skill level.
- Taught data structures and algorithms, applying understanding through coding challenges and real-world projects.

Software and Computer Engineering Society Jun. 2024 – Aug. 2024
Software Engineer Intern *San Jose, CA*

- Spearheaded design of real-time monitoring app with Prometheus and Grafana, enabling monitoring for computers
- Designed scripts to draw data from user's computer with C for Linux and Windows operating systems.
- Created RESTful APIs in Node.js to perform CRUD operations on data stored in MongoDB with Express.js.

PROJECTS

Secure Send | *TypeScript, Next.js, Supabase, PostgreSQL, Web Crypto API, Tailwind CSS*

- Developed a secure file-sharing application with client-side encryption and user authentication with Google OAuth.
- Designed a custom AES-GCM hashing algorithm to store files securely in Supabase's PostgreSQL database.
- Integrated modular TypeScript utilities for file encryption, validation, and handling to increase reusability.

Cat and Dog Image Classification | *Python, PyTorch, NumPy*

- Built a convolutional neural network (CNN) to classify 100+ images of dogs and cats with 90% confidence.
- Used PyTorch to train model with the CIFAR-10 dataset, implementing forward propagation on neural network.

SCE-Advisor | *C, Prometheus, Grafana, Docker*

- Implemented WebSockets to draw 8 different hardware processes including CPU and RAM usage for a club app.
- Connected Prometheus and Grafana to the Dockerized server to see Prometheus-parsed data in Grafana dashboard
- Built an HTTP web server with C using socket programming, reducing system monitoring latency by 25%.

TECHNICAL SKILLS

Languages: JavaScript/TypeScript, Python, Java, HTML/CSS
Frameworks: React, Node.js, Next.js, Express.js, FastAPI, PyTorch, LangChain, Tailwind CSS
Developer Tools: Git, GitHub, Docker, MongoDB, PostgreSQL, Supabase
Certifications: Machine Learning Specialization, Artificial Intelligence