

Nicholas Le

408-888-1374 | nicholasl.le224@gmail.com | nicholasle.me | linkedin.com/in/nicholasle04 | github.com/nicholasle04

EDUCATION

San Jose State University

Aug 2022 – May 2026

B.S. Computer Science

San Jose, CA

- GPA: 3.98/4.0 (President's Scholar)
- Coursework: Data Structures and Algorithms, Intro to Database Management, Object Oriented Design, Computer Architecture (MIPS assembly), Operating Systems, Computer Networks, Linear Algebra
- Organizations: SJSU Software Engineering Society (Development Team), Cube3 Satellite Club (Controls Team)

EXPERIENCE

Research Assistant

Feb 2024 – Present

San Jose State University

San Jose, CA

- Constructed an ACGAN with Python and Keras to generate synthetic data and classify across 34 malware families
- Processed 20 GB of executable files into an image dataset to be used for training using Pillow and Matplotlib
- Improved classification accuracy by 10% by experimenting with different data representations and color spaces

Controls Team Member

Feb 2023 – Present

SJSU Cube3 Satellite Club

San Jose, CA

- Developed an intuitive interface to send and receive data from a remote computer using React and Web Serial API
- Enhanced CanSat capabilities by adding data logging, facilitating valuable in-flight data collection
- Revamped club website using React and Tailwind CSS for a modern, user-friendly experience

Software Engineer Intern

Jun 2023 – Aug 2023

SJSU Software and Computer Engineering Society

San Jose, CA

- Created an application to stream YouTube videos to a standalone Raspberry Pi and TV in an SJSU Classroom
- Improved video access speed by ~50% through the use of an LRU cache for previously requested videos
- Built a FastAPI server monitored with Prometheus to manage and download YouTube URLs to the video cache
- Deployed the application backend on an Ubuntu server using Docker for configuration and containerization

IT Technician I

Jun 2023 – Aug 2023

Corovan

San Jose, CA

- Managed inventory of electronics and personal items with careful attention to detail to ensure zero losses
- Conducted thorough quality checks to validate functionality and assisted customers with troubleshooting
- Worked closely with colleagues to resolve customer inquiries focusing on delivering rapid solutions

PROJECTS

WeenVerse | *Python, TypeScript, SQL, Supabase, SvelteKit, Redis, Docker*

April 2024 – Present

- Developing a custom web application in a team of 5 for a high-profile online influencer serving 3,500+ users
- Created automated scrapers for Reddit and Twitch chat extracting real-time data for sentiment analysis
- Optimized queries through function redesign and table normalization to scale from 1,000 to 500,000 daily requests
- Leveraged Twitch API to convert Twitch channel points into website currency, driving interactivity and retention

Classify | *JavaScript, SQL, Python, FastAPI, React, SQLite, Docker*

Jan 2024 – Mar 2024

- Engineered a full-stack web application enabling SJSU students to search for courses with natural language
- Structured the backend with Nginx as a reverse proxy and load balancer for FastAPI Docker containers
- Orchestrated DNS setup and port forwarding to allow for external access to a self-hosted Raspberry Pi server

Chess Engine | *Python*

Jul 2023 – Sep 2023

- Designed a chess engine capable of analyzing 50,000 positions per second to provide move suggestions via minimax
- Increased engine search efficiency by 100% with move ordering and alpha-beta pruning to avoid redundant searches
- Accelerated search speeds further by 50% using bitmaps and transposition tables to memoize previous evaluations

TECHNICAL SKILLS

Languages: Python, JavaScript, Java, SQL, HTML/CSS

Frameworks/Libraries: React, FastAPI, Express.js, Node.js, Spring Boot, NumPy, BeautifulSoup

Developer Tools: Git, GitHub, Docker

Databases: PostgreSQL, MongoDB