

Nicholas Le

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EDUCATION

San Jose State University

Aug. 2022 – May 2025

B.S. Computer Science

San Jose, CA

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

EXPERIENCE

Development Team Officer

March 2023 – Present

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
- Set up automated workflows with GitHub Actions to lint contributors' code to enforce syntax style
- Reviewed pull requests for development team projects to guarantee code quality and functionality

Controls Team Member

Feb. 2023 – Present

Cube3 Satellite Club

San Jose, CA

- Developed an intuitive interface using React and Web Serial API to send and receive data from a remote computer
- 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

IT Technician I

June 2023 – Aug. 2023

Corovan/Corotech

San Jose, CA

- Configured and disassembled workstations, monitors, and peripherals for Google, Meta, and Adobe offices
- 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

PROJECTS

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

Jan. 2024 – Present

- Engineered a full-stack web application that allows students to search for courses with natural language
- Structured the backend with Nginx as a reverse proxy and load balancer for FastAPI Docker containers
- Integrated Zilliz vector database to store course description embeddings for semantic search
- Orchestrated DNS setup and port forwarding to allow for external access to the server hosted on a Raspberry Pi

Uniplan Calendar | *MongoDB, Express.js, Node.js, React*

Aug. 2023 – Sept. 2023

- Architected and developed a full-stack calendar web application on the MERN tech stack deployed on Vercel
- Implemented React components for displaying, creating, and editing events across different views
- Ensured data security and user authentication through token-based authorization with JSON Web Tokens
- Crafted Mongoose schemas and collections to ensure data integrity and consistency within MongoDB

Chess Engine | *Python*

July 2023 – Sept. 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 repetitive searches
- Accelerated search speeds further by 50% using bitmaps and transposition tables to look up previous evaluations

TECHNICAL SKILLS

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

Frameworks: React, FastAPI, Express.js, Node.js, MongoDB

Developer Tools: Git, GitHub, Docker, Postman

Libraries: NumPy, BeautifulSoup