Najel Alarcon

415-527-8295 | najel.alarcon@sjsu.edu | linkedin.com/in/najel-alarcon/ | github.com/Najel-A

EDUCATION

San José State University — San Jose, CA
Masters of Science in Data Analytics, Specialization in Data Engineering — *Aug. 2024 – May 2026*

University of California, Santa Cruz — Santa Cruz, CA
Bachelor of Science in Computer Engineering, Minor in Computer Science — *Sept. 2019 – June 2023*

EXPERIENCE

Software Engineer Intern — Oct. 2020 – Apr. 2021
Alef Aeronautics — *Santa Clara, CA*
- Contributed to flight control software development for a flying vehicle startup
- Developed user interface for monitoring vehicle systems diagnostics
- Managed codebase using Git, ensuring version control and documenting changes and updates

PROJECTS

Generative Visuals (*Ongoing*) | *React.js, Python, AWS, Machine Learning, Librosa*
- Leading a team of developers to create a generative AI system that generates dynamic visuals in real time based on audio input, transforming music files into corresponding visual patterns
- Working on the backend development, using Python and Librosa to build models that process audio signals and generate creative visual outputs
- Overseeing testing of both the frontend and backend for integration, functionality, and performance

Traffic Data Warehouse Analysis | *Python, AWS S3, Redshift, ETL, SQL, Data Warehousing*
- Collaborated with a team to design and implement a data warehouse to aggregate traffic-related datasets, including accident and weather information
- Stored data in Amazon S3 and used Redshift to create fact and dimension tables to perform queries
- Utilized Python to clean and transform all relevant datasets

Workout Tracker | *MongoDB, Express.js, React.js, Node.js*
- Designed and implemented a user-friendly interface allowing users to input exercise details
- Implemented MERN authentication to ensure secure access to user accounts, allowing individuals to manage and track their personal workouts
- Employed RESTful APIs for seamless communication between the frontend and backend components of the application

Slack Clone Mobile Application | *Kotlin, Swift, React Native, Barista, XCTest, Jest*
- Developed a Slack clone mobile application in Kotlin, Swift, and React Native
- Implemented RESTful API integration to enable real-time messaging, authorization tokens for access, and collaboration features within the application
- Conducted unit tests and debugging to enhance the stability and reliability of the application

File Transfer | *C, Socket Programming, UDP*
- Developed a proxy reliable file transfer application in C, utilizing the User Datagram Protocol (UDP)
- Designed and implemented a selective repeat protocol on top of UDP to ensure reliable and error-free file transfer
- Implemented error detection and correction mechanisms

IoT Obstacle Detection System | *C++, Arduino Nano BLE 33, IRAS Sensors*
- Developed an IoT Obstacle Detection System utilizing Arduino Nano 33 BLE
- Integrated GPIO read/write for obstacle detection to trigger an external red LED, displayed IRAS messages on LCD
- Configured Nano 33 BLE as a peripheral device, enabling real-time updates via BLE Phone App or BLE console

TECHNICAL SKILLS

Languages: Python, C/C++, JavaScript, HTML, CSS, Swift, Kotlin, Java
Technologies/Frameworks: React.js, React Native, Node.js, Express.js, MongoDB, Firebase, Django, AWS
Developer Tools: Git, Unix, VS Code, Postman, Visual Studio, PyCharm, IntelliJ, Eclipse
Libraries: pandas, NumPy, Matplotlib