# Gavin Jiang

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## EDUCATION

**University of Southern California** — Los Angeles, CA
*Master of Science in Computer Science, Emphasis in Artificial Intelligence* — *Aug. 2024 - Jun. 2026 (expected)*
Pending Start

**Santa Clara University** — Santa Clara, CA
*Bachelor of Science in Computer Science, Minor in Math* — *Sep. 2021 - March 2024*
Relevant Coursework: Object-Oriented Programming, Data Structures, Design Management of Software, Intro to Embedded Systems, Intro to Logic Design, Probability & Statistics I + II, Linear Algebra, Discrete Mathematics, Data Science, Programming Languages, Applied Machine Learning, Theory of Automata & Languages, Theory of Algorithms, Computer Networks, Operating Systems

Cumulative GPA: 3.73/4.00

## EXPERIENCE

**Researcher** — January 2023 – Present
*EPIC IoT | C/C++, Python, Arduino, Typescript, Linux* — *Santa Clara, CA*
- Developed regression models for the interpolation of Dissolved Oxygen values based off of measurement and testing procedures for IR and DO values
- Developing IoT Data pipeline to send/receive data from devices measuring oxygen
- Developing API to interface between Network and Link Layer of Network Protocol Stack for HA (Hydration Automation) stations
- Implemented WiFi communication of data for T2 Whispernodes to relay sensor data using ESP8266-01 with an Arduino Compatible Board
- Implemented AB energy-aware networking protocol to send sensing data to bay-station for (Dissolved Oxygen Monitoring System) & HA
- Involved in hardware setup, bring-up, debugging, and troubleshooting

**Teaching Assistant** — April 2023 – June 2023
*SCU | C/C++* — *Santa Clara, CA*
- Lab TA for Object-Oriented Programming course at SCU
- Help students troubleshoot code and help them understand the basics of OOP programming

## PUBLICATIONS

**DOxy: A Dissolved Oxygen Monitoring System** (Pending Publication) in MDPI Sensor Networks Journal

## PROJECTS

**AI Ransomware Detection** | *Python, Keras, SKLearn* — 2023
- Training ML models, such as XGBoost, Neural Network, and Naive Bayes to detect Ransomware from a dataset with 30,000+ features and 1,500+ samples
- Contacting cybersecurity researchers to acquire more samples to train our models off of, while also investigating the pros/cons of other models

**Esports Team Management App** | *Python, Django, HTML/CSS, SQLite* — 2022
- Full-stack team lead for a webapp that stores schedules, player info, tournament info, and registration for collegiate teams
- Developed 3 key modules: accounts (Login functionality), teams (Player and Team databasing), and events (Creating and updating events) using Django framework

**YGOToolboxBot** | *Python* — 2022
- Developed a Discord bot that utilizes an API to pull any relevant card information and present them in embeds

## TECHNICAL SKILLS

**Languages**: C/C++, Java, Python, HTML/CSS, JavaScript, Rust, C#, SQL (SQLite), Typescript, Verilog, Assembly, Scala, Linux Shell, CUDA
**Frameworks**: Django, Bootstrap, React.js, Keras, TensorFlow, SKLearn