

# Gavin Jiang

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## EDUCATION

### 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 Whispermodes 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

### Competitive Director

February 2022 – December 2022

*SCU Esports*

*Santa Clara, CA*

- Managed competitive esports teams for Santa Clara University's Esports Club
- Hosted multiple tryouts across multiple esports titles and coordinate between captains, coaches, and managers

## 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