

# TYLER LE

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## EDUCATION

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### University of California San Diego

Sep. 2021 – Jun. 2024

*Bachelor of Science in Computer Science*

- GPA: 4.00/4.00
- Courses: Data Structures, Algorithms, Computer Systems, Object-Oriented Design

## EXPERIENCE

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### Amazon

Jun. 2023 – Sep. 2023

*Software Development Engineer Intern | Technologies TBA*

*Seattle, WA*

- TBA

### UC San Diego Computer Science and Engineering Department

Sep. 2022 – Present

*Instructional Assistant | C++*

*San Diego, CA*

- Taught upper-division advanced data structures such as; graphs, trees, priority queues, and maps as well as concepts such as memory management, pointers, recursion, and time/space complexity.

### General Atomics

Jun. 2022 – Aug. 2022

*Software Engineer Intern | C/C++, SVN, XML*

*San Diego, CA*

- Maintained and supported the Autonomous Takeoff and Landing Capability for remotely piloted aircraft, including the major refactoring of 5+ subprojects across 1.4M LOC in C/C++
- Partnered with my lead to investigate and resolve 16% of backlogged bugs spanning across; the crew alert system, communication between the aircraft/ground control station, and the autonomous takeoff and landing capability
- Upgraded the crew alert system user interface in XML and functionality in C by adding critical alerts between the aircraft and the ground control station such as excessive angle of flight

### Cardea Bio Inc.

Jun. 2021 – Sep. 2021

*Software Engineer Intern | C#, .NET, Python, Git, JSON*

*San Diego, CA*

- Developed a C#.NET application that fully interfaces with 15+ liquid-handling robots, allowing cancer researchers to start/stop robots, upload experiment files, and retrieve the robot's operational status
- Designed and built an API, allowing scientists to fully interact with the liquid-handling robots from our application
- Automated 20+ scientific experiments with a Python script using queried data from a MySQL database, saving scientists over 200 hours of repetitive pipetting experiments
- Used the AWS SDK to automatically upload experiment data to AWS S3 following each lab experiment

## PROJECTS

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### Huffman Compression/Decompression Tool | C++

- Designed and programmed a Huffman compression and decompression tool in C++
- Constructed a Huffman tree using a bitwise buffer and tree serialization, leading to a 70% decrease in filesize
- Optimized and profiled runtime using gprof (GNU Profiler), leading to a 10% increase in overall runtime

### Zoom Attendance Tracker | Python, Flask, HTML, CSS | [Link](#)

- Built a full-stack Flask web application, allowing users to upload a screenshot of their Zoom meeting and to autonomously mark attendance using facial recognition
- Implemented an image upload feature using Dropzone and displayed attendance data using EJS templating

### UCSD Chatroom App | Node.js, Express, SocketIO, MongoDB, HTML, CSS, JavaScript | [Link](#)

- Created a MERN stack chat application with multiple rooms using SocketIO, achieving 300+ users and 1500+ messages on the first day of release
- Developed several Mongoose schemas in order to compile user information and chat history onto MongoDB

## TECHNICAL SKILLS

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**Languages:** C/C++, Python, C#, Java, JavaScript, HTML/CSS

**Technologies:** Git, Subversion, .NET, REST, Node.js, Flask, JUnit, Express, MongoDB, OpenCV

**Other:** Scrum, Agile Methodologies, CI/CD