TYLER LE

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EDUCATION

University of California San Diego   Sep. 2021 – Jun. 2024
Bachelor of Science in Computer Science
- GPA: 4.00/4.00
- Courses: Data Structures, Algorithms, Client-Side Programming, Computer Systems, Object-Oriented Design

EXPERIENCE

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*
- Tutored undergraduate students in advanced data structures, including trees, graphs, memory management, and hash tables, and received a 100% approval rating from students.
- Assisted students in understanding and applying data structure concepts to solve real-world problems.

General Atomics   Jun. 2022 – Aug. 2022
Software Engineer Intern | C/C++, SVN, XML   *San Diego, CA*
- Refactored 5+ subprojects in **C/C++**, spanning 1.4M lines of code, to support and maintain the Autonomous Takeoff and Landing Capability for remotely piloted aircraft
- Collaborated with my lead to address 16% of backlogged bugs affecting the crew alert system, aircraft/ground control communication, and Autonomous Takeoff and Landing Capability
- Improved the crew alert system by updating the XML user interface and adding critical C-based functionality for alerts between the aircraft and 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 integrates with 15+ liquid-handling robots, enabling cancer researchers to start/stop robots, upload experiment files, and retrieve the robot's operational status
- Designed and built an API that allows scientists to fully interact with liquid-handling robots through our application
- Automated 20+ scientific experiments with a **Python** script, using queried data from a **MySQL** database to save scientists over 200 hours of repetitive pipetting experiments
- Utilized the **AWS SDK** to automatically upload experiment data to **AWS S3** following each lab experiment

PROJECTS

Job Application Tracker | *HTML, CSS, JavaScript, Puppeteer, Jest | Link*
- Configured a comprehensive **CI/CD pipeline** using GitHub Actions for automated linting, HTML validation, documentation generation and testing of code changes.
- Wrote and executed automated E2E (end-to-end) tests using **Jest** and **Puppeteer** that simulate user interactions, such as clicks and form submissions to ensure the app's overall functionality with 97% code coverage.
- Designed a user-friendly HTML/CSS interface optimized for various screen sizes and devices.

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 30% 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

TECHNICAL SKILLS

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