Tiffany Chieu

Contact

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Technical Skills

Languages:
C/C++, Rust, Go, Python, Java, HTML/CSS/JavaScript, Verilog

Other:
OpenCV, React, nodeJS, Git

Interests

- Embedded software
- CubeSat development
- Robotics
- Computer vision
- Machine learning

Awards

Best IoT That Incorporates Multiple Nodes
SD Hacks 2019 | UCSD

Best Use of Taboola Trends API
LA Hacks 2019 | UCLA

ABRSM Certificate for Piano Grade 8
2016

Education

University of California, Los Angeles **Sep 2019 - Jul 2023**
B.S. in Computer Science and Engineering | Degree expected 2023
Cumulative GPA: 3.88
Relevant coursework: Operating Systems, Algorithms, Computer Systems Architecture, Systems and Signals

Experience

Academic Part-time **Feb 2022 - Present**
NASA JPL, Electronic Design Validation and Test Group (349E)
- Developing simulation software for flight electronics for the Mars Sample Return Lander, including verification of low-level communication protocols and error injection

C&DH Lead, Software Engineer **May 2021 - Present**
Bruin Spacecraft Group, Project Rapid | UCLA
- Co-managing a group of 5 students on the Command and Data Handling team, including creating and delegating tasks
- Currently developing flight software for CubeSats in C++

Software Developer **Sep 2021 - Feb 2022**
Unmanned Aerial Systems, IEEE UAV Competition | UCLA
- Developed a feature-based, real-time object tracking algorithm using OpenCV and optical flow

Lead Software Engineer **Oct 2020 - May 2021**
Bruin Spacecraft Group, Project Reach | UCLA
- Managed a team of 10 students to develop CubeSat flight software
- Restructured monolithic data packet schema into discrete packets containing data collected from a sensor at a given time
- Added encoding/decoding logic for the data packets

Backend Developer **Apr 2020 - Sep 2020**
DevX, BConnect | UCLA
- Restructured database schema to remove redundancies and increase efficiency of database queries
- Improved error handling and expanded test coverage

Projects

imgproc-rs **Dec 2020 - Present**
A Rust Image Processing Library
- Implemented most common image operations (including linear filtering through convolution; median, bilateral, and alpha-trimmed mean filters)
- Improved performance via multithreading and SIMD intrinsics

space-invaders **Nov 2021 - Dec 2021**
A simple video game on an FPGA
- Developed a simple version of Space Invaders written in Verilog on a Nexys3 Spartan-6 FPGA
- Implemented a basic VGA controller capable of drawing and animating sprites stored as bitmaps in memory, and detecting collisions between objects on the screen
- Implemented software button debouncing for user interaction