Chu Yi Aaron Herr

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Education

B.S., Computer Science Fall 2025

San Francisco State University, San Francisco CA

A.S., Computer Science

Clovis Community College, Clovis, CA, GPA 3.13

Software Technical Skills – C/C++, Java, Python, CMake, Git, Data Structures and Algorithms, Object Oriented Programming, Graphs Algorithms, Operating Systems, Unix/Linux, Software Design Patterns, Agile/Scrum Methodologies, Multithreaded/Concurrency development, Valgrind/Calgrind, virtual memory analysis, Networking protocols (TCP, UDP)

WORK EXPERIENCE

University of California Berkeley, Berkeley, CA September 2022 – Present

- Using C/C++, using the Qt framework and it's QMake build system.
- Developed multiple worker threads that have a single source process for streaming data to docking windows.
- Greatly showing my curiosity, and eagerness to learning in a quick and fast-paced environment, while still pursuing my degree in Computer Science.
- Helped in integration testing using Qt's QTest framework and continuous unit testing our code base for assurance of correctness.

Project Experience

Game Engine in OpenGL | GitHub Fall 2023 - Present

- Inspired in developing my own game engine to dive in working with different complex systems.
- Rendering textures, shaders in the form of draw quads.
- 2D camera movement and controller allowing to rotate and adjust Orthographic Camera.
- Implemented profiling tooling in the engine to help debugging and monitoring function call stack and time stamping.
- Provided thread safety when profiling for multiple sessions.

6502 Emulator | GitHub Fall 2023 - Present

- Reversed engineered an 8-bit processor called the 6502.
- Emulated how virtual ram and rom read, write data to and from virtual memory.
- Developed the adder functions for the ALU as part of the emulator to do basic arithmetic operations.

Algorithm Visualizer

- Utilizing the C++ SFML Graphics library to implement graphs algorithms.
- Purpose for this application was to visualize complex graphs algorithms ranging from your common graph's algorithms to more complex algorithms.
- Algorithms from Dijkstra's and A* pathfinding, to visualizing Max flow graphs.

CLUB/ACTIVITIES

SJSU Robotics Club | GitHub Fall 2023 – Present

- Worked in the Intelligence Systems division, collaborating and working with my team on the autonomy side of building the rover.
- Worked in fixing the GPS locking connection to the satellite.