Chu Yi Aaron Herr

San Jose, CA 95112 | (559) 908-8784 | heraaronhotmail@gmail.com | https://www.linkedin.com/in/aaron-her

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, 5+ C++ development(14, 17, 20), Robotics, OpenGL, Vulkan, SPRIV-V, GDB (gnu-debugger), Valgrind/Calgrind, 3D development, Data Structures and Algorithms, Linux/Unix environments, Rendering/Graphics pipeline, Graphics Architecture design, CMake, OpenCL (GPU development), Strong fundamentals in Linear Algebra.

WORK HISTORY

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

- Developed GUI Applications using C++ and the Qt framework.
- Contributed to implementing docking windows for the LLSM application.
- Docking windows were used to enabling users to effectively have a visual hub for data analysis.
- Participated in meetings for implementing new features.
- Worked in a multithreaded environment where managed worker threads have process for streaming data to the docking windows, where users can receive feedback.
- Utilize multiple debugging approaches for error handling in parallel processing.

PROJECT

Graphics Display Drivers **Spring 2023 – Present**

- Led in the design and implementation of the generic display drivers for interfacing with hardware in C++.
- Worked along my mentor in developing generic display drivers for different pixelated LCD screens as a project part of the Libhal framework.
- Applied multiple paradigms for reduce costs such as expanding vtables for saving space when devices have limited spaces available to the user.
- Evaluating different tradeoffs in mapping different workloads to the different displays.

3D Graphics Engine | GitHub **Fall 2023 – Present**

- Developed a 2D/3D game engine in C++ currently for the past 4 months, by myself.
- Added Batch rendering to minimize draw calls being made.
- Added an editor for users to interact more easier with the engine.
- Created a profiling tool to monitor decrease in performance by timing important functions.
- Added Serialization/Deserialization for enabling users to load/save scenes using YAML.
- Entity Component System(ECS) for representing objects as entities allowing to contain multiple components.

CLUB/ACTIVITIES

SJSU Robotics Club | GitHub **Fall 2023 – Present**

- Worked in the Autonomy team for the Robotics team in preparation for the SARS University Rover Competition.
- Developing the server side for streaming lidar sensory data via the TP Link.
- Where we implemented the autonomy navigation system receiving data streaming through the network.