Chu Yi Aaron Herr

San Jose, CA 95112 | (559) 908-8784 | [heraaronhotmail@gmail.com](mailto: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**  **Fall 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](https://github.com/SpinnerX/Game_Engine) **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.

**Logs** | Bash Script **Summer 2023**

* Collaborated with my Computer Science professor in utilizing bash for developing a script for scanning for anomalies among students to prevent cheating.
* Utilizing commits and Unix commands diffs for scanning students commits from the log script using additional information, timestamps, commit hash ID’s.
* Detecting when students copy and paste in their programming assignments.

**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.