

# Chu Yi Aaron Herr

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## EDUCATION

### San Francisco State University

San Francisco, CA

Bachelor of Science, Computer Science

May 2025

- GPA 2.9

Coursework: Data Structures and Algorithms, Computer Architecture, Discrete Mathematics, Android Development, Game Engine Architecture, Operating Systems

## WORK EXPERIENCE

### University of California, Berkeley

Berkeley, CA

Undergraduate Staff Software Engineer

Oct 2022 – Present

- Problems users were having were having an effective way at monitoring data, doing data analysis.
- My solution in solving this issue was implementing docking windows. By creating a process to run in worker threads, streaming data in real time to the user via the docking windows.
- Goals was using the docking windows, for when users submit jobs can receive feedback through these docking windows.
- My skills in multithreading and parallel processing development allowed me to effectively design and accomplish real results, of working in a multithreaded environment.

## SKILLS

**Technologies:** Git, OpenGL, Vulkan, Ffmpeg, Boost (networking), Libhal, Linux/Unix, Kernel Development, Qt, CUDA, OpenCL, GLSL, GDB (Gnu Debugger), Valgrind/Calgrind, Arduino, Soldering  
**Languages:** C/C++ (17, 20), Java, Python, Lua, Scripting (Bash, Csh, Tcsh), ARM32 asm

## CLUBS/PROJECTS

### SJSU Robotics

San Jose, CA

Intelligence Systems Member

Jan 2023 – Present

Worked in the autonomy team to develop the navigation system for the rover, being built in on the robotics team. Currently, improving my skills in developing great communication skills. While getting enough experiences in Machine Learning. Where I worked with my autonomy team members in developing API calls to the GPS, and LiDAR for assisting in the rover's spatial awareness.

### Libhal Contributor

San Jose, CA

Open-Source Contributor

Present

Worked in developing porting different drivers to libhal. Porting drivers such as lpc40, stm32, and i2c, DAC, ADC, CAN, etc. Where contributing to libhal, I continued in adding more support to other chips. Continued in porting these drivers, so libhal can support different kinds of arm chips.

### Game Engine

San Jose, CA

Personal Project

Oct 2023 – Present

Developed a Game Engine using CMake and C++. Using OpenGL's rendering API's for implementing my game engine. During the development of the engine, I was able to implement a few core features to it. Developed features included a 2D/3D Renderer, UI Editor, Serialization/Deserialization. Allowing the engine to be capable of creating, loading, and saving scenes through the editor. Instead of programmatically doing these following steps.