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.
- Given opportunities to continue to learning the Qt framework using C++ to develop GUI applications.

SKILLS

Technologies: Git, Linux, Unix, OpenGL, Vulkan, Kernel Development, CUDA, OpenCL, GLSL, GDB (Gnu Debugger), Valgrind/Calgrind, GPU Programming, CUDA, Qt GUI Development, Compilers
Soft Skills: Analytical Thinker, Good Verbal and Written Communication, Excellent Analytical Skills
Languages: C/C++ (17, 20), Java, Python, Lua, Scripting (Bash, Csh, Tcsh), ARM32 assembly

CLUBS/PROJECTS

SJSU Robotics **San Jose, CA**
Intelligence Systems Member Jan 2023 – Present
Working in the autonomy with firmware. This includes troubleshooting the GPS, LiDar, and Compass to for giving related information. Helping give data for the rover to do autonomous navigation. Problems that I solved was reading output as to getting a lock to the GPS. Collaborating with team members in debugging and calibrating the firmware for Compass.

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.

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.