Chu Yi Herr

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Skills

- C | C++ | Java | Python | Git | JSON | OpenGL | Vulkan | OpenCL | CUDA | Robotics | NoSQL | Agile | GDB | Unix Shell Scripting
- Software Engineering | Linux | Compilers Design | GPU Development | OOP | Kernel Development | CI/CD | Unit Testing | Agile | Operating System | Distributed Systems | Intel/AMD microprocessors
- Robotics | Embedded Systems | Firmware | Networking (TCP/UDP) | Communication Protocols (I2C, SPI, UART, IoT) | Docker Container

Experience

Software Engineer **UC Berkeley** *Berkeley, CA, USA* **10/2022 - 04/2024**

- Led in the designing and developing of UI applications for the end-user, increasing usability by 10 – 15% using the latest technologies of C++, Qt, and QTCreator.
- Developing LLSM GUI applications for multiple platforms, Mac and Linux.
- Implement scalable plugins back-end using Java and Javax and managed the UI design for those plugins.
- Initiated in creating multiple innovative solutions for that tackle new problems on multiple projects.
- Hosted meetings discussing application requirements and software dependencies for workload balancing, software implementation, testing, and configuring metrics systems.
- Continuous Integration/Deployment pipeline integration, pull requests, code reviews, load/stress testing, unit/integration/e2e testing.

Education

Bachelor of Science **San Francisco State University** *San Francisco, CA* **01/2024 – 05/2026**

- Major in Computer Science

Associates of Science **Clovis Community College** *Clovis, CA* **05/2023**

- Major in Computer Science

Projects

- **A-Compiler:** Designed and implemented my own compiler and programming language called A-Compiler (C++, ARM64 asm). Here is the link to the GitHub **(02/2024)**
- **ENGINE3D:** Creator of a 3D Game Engine (C++, OpenGL). Here is the link to the project GitHub **(02/2024)**
- **MINI-ENGINE3D:** Developed a mini version of Engine3D using C++ and Vulkan. This is the link to the project, GitHub **(02/2024)**
- **Rocket-Game:** Using Engine3D to develop a rocket game. Link to the game made by Engine3D is GitHub **(012/2023)**
- **Libhal-Soft:** Porting over different drivers such as **lpc40**, **CAN**, **ADC**, **DAC** for adding support to different arm chips. Contributing to this Open-Source project. **(12/2023)**
- **NovaOS:** Creator, designer, and developer of an Operating System called NovaOS developed using x86 and C **(12/2023)**
- **Holographic Projection:** Lead, designer, and developer of a class group project developing a holographic projector using multiple sensors to give it capabilities to interacting with users **(03/2022)**
- **Log Script**: Assisted in collaboratively working with my professor, developing a bash script. Using the script for as a student anti-cheat detector that checks for anomalies when students submit their hands-on programming homework using Linux utility commands. **(06/2023)**

Clubs

- **SJSU Robotics:** Member on the Intelligence Systems team. Collaborating in calibrating firmware of the GPS, Compass, and Lidar sensors to help retrieve data for the autonomous rover navigation system using **Python**.