

Hutton Grabiell

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EDUCATION

University of Washington - Seattle

B.S. Computer Science

Seattle, WA

June 2026

EXPERIENCE

MATRIX Software

July 2021 – June 2022

Software Intern

- Implemented end-to-end, automated chat feature in iOS application saving development team 3+ weeks worth of time
- Refactored Ansible playbooks and shell scripts to automate the creation of Linux containers which ran the customer training environment
- Conducted research on OAuth2.0 and presented findings to the development team leading to the implementation of OAuth2.0 on company software

Husky Robotics @ University of Washington

Sep. 2022 – Present

Software Developer

- Created networked protocol to retrieve real-time telemetry from Pixhawk 6C flight controller
- Wrote a library to perform autonomous operations using our autonomous navigation stack
- Implemented firmware to handle limit switch interrupts on custom motor boards
- Developed functions to assemble CAN packets for limit switches

UC-Irvine Technology and Mental Health (TEAM) Lab

August 2021 – March 2022

Research Assistant

- An author of the published report 'Digital Tools and Solutions for Teen Mental Health'
<https://onemindpsyberguide.org/resources/teen-app-guide/>
- Curated an initial list of over 200 applications that fell into the broad scope of teen mental health
- Trimmed the initial list of applications down to 19 using strict filtering criteria

PROJECTS

Networked Key-Value Cache | *Rust*

July 2022 – October 2022

- Opens a TCP listener on the localhost to handle GET, PUT, and DELETE HTTP requests
- Multi-threaded using a thread pool and a read write lock to allow concurrent reads while avoiding corrupt data
- Stores encrypted data only the user can access with their server provided encryption key
- Wrote corresponding CLI application for user facing interactions https://github.com/huttongrabiell/skv_talk

SerenityOS Open Source Contributions | *C++*

April 2022 – Present

- Implemented case conversions in Vim emulation engine
- Added strike-through text support to Markdown renderer
- Implemented tab indentation and unindentation on selected text in text engine
- Added ability to delete from current position to end of line using Shift+D in Vim emulation engine

Physics Collision Simulator | *C++*

July 2023 – Present

- Used Raylib game engine to simulate elastic and inelastic collisions between two objects
- Created user interface to switch between collision types
- Calculates object velocities according to equations of classical mechanics

TECHNICAL SKILLS

Languages: C++, C, Python, SQL, Rust, Bash

Developer Tools: Git, Linux/Unix, GitHub Workflows, GitHub, Bitbucket