



## EDUCATION

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| <b>University of Utah</b><br>Computer Science with Games Emphasis: <b>GPA 3.98/4.0</b> | Salt Lake City, UT<br>Aug 2025 |
| <b>Cybersecurity Boot Camp</b><br>CompTIA Security+ compliant                          | Online<br>Feb 2022 - Aug 2022  |

## EXPERIENCE

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| <b>University of Utah School of Computing</b><br><i>Teaching Assistant</i>  | Salt Lake City, UT<br>Aug 2022 - Present |
| <ul style="list-style-type: none"><li>Helped 100+ students pass Accelerated Introduction to Object Oriented Programming with Java with a B or better</li><li>Prevented 5+ students from failing and helped to retain them in their major as a Retention Teaching Assistant</li><li>Graded assignments, held in-person office hours, ran labs, proctored exams, provided review sessions, etc.</li></ul> |  |

## PROJECTS

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|---|---------------------|
| <b>PortalCrawler</b>   <i>Godot</i>   | May 2024 - Aug 2024 |
| <ul style="list-style-type: none"><li>Led 4 other members in a Traditional Game Development Class Project</li><li>Implemented all the enemy AI and pathfinding, shop, and level system, leveraging state machines</li><li>Utilised Github Issues, Milestones, and Projects for team management with Agile workflow</li></ul> <b>Demo:</b> <a href="https://itch.io/portalcrawler">itch.io/portalcrawler</a> <b>Source:</b> <a href="https://github.com/manglemix/PortalCrawler">github.com/manglemix/PortalCrawler</a>  |                     |
| <b>NASA Lunabotics</b>   <i>Rust, tokio, nalgebra, rayon, crossbeam, ffmpeg</i>   | Aug 2023 - May 2024 |
| <ul style="list-style-type: none"><li>Established a complete robotics framework and ecosystem from scratch (only team to do so)</li><li>Programmed a robot that digs and dumps autonomously, and uses a 2-pilot system for driving remotely</li><li>Achieved 3rd place out of 50 universities and the US military at the Kennedy Space Center</li></ul> <b>Demo:</b> <a href="https://youtu.be/watch?v=OvzOrHbLd_M">youtu.be/watch?v=OvzOrHbLd_M</a> <b>Source:</b> <a href="https://github.com/utahrobotics/lunadev-2024">github.com/utahrobotics/lunadev-2024</a>     |                     |
| <b>deTrash</b>   <i>Vercel, Sveltekit, Flask, TypeScript, Google Maps, YoloV5, GPT 3.5</i>  | Oct 2023            |
| <ul style="list-style-type: none"><li>Produced a frontend that used computer vision AI to identify trash in user submitted images and track their locations on a heat-map to help non-profit trash clean-up organizations plan their routes and save on gas</li><li>Achieved 2nd place out of 247 other teams for 24 hours in the Hack OHI/O 11 hackathon</li></ul> <b>Demo:</b> <a href="https://trash-tests.vercel.app">trash-tests.vercel.app</a> <b>Source:</b> <a href="https://github.com/manglemix/hackohio-frontend">github.com/manglemix/hackohio-frontend</a> |                     |
| <b>WebRTC Signalling Server</b>   <i>Rust, tokio, axum, rustls, letsencrypt, EC2</i>  | Aug 2023            |
| <ul style="list-style-type: none"><li>Created a WebSocket API that connects WebRTC clients together with a room code that is resistant to abuse</li><li>Designed to be performant, and production ready with TLS using crates.io/crates/hypermangle-core, which is a crate that was developed concurrently for this project to massively simplify the process of creating HTTPS secured APIs</li></ul> <b>Source:</b> <a href="https://github.com/manglemix/webrtc-service">github.com/manglemix/webrtc-service</a>   |                     |

## SKILLS

**Languages:** Rust, Python, Javascript, Typescript, HTML, CSS, C, C++, C#, Java, Kotlin, SQL

**Technologies:** AWS (S3, EC2, DynamoDB, Amplify, Lambda, Cognito, Pinpoint, SES), Azure, Docker, Vercel, GitHub Actions, WebRTC, WebSockets, Svelte, React, Ansible, Tailwind, Qt, MAUI, Django, FFmpeg, Linux

**Game Engines:** Godot, Unreal Engine 5, GameMaker, Unity

**Activities:** Programming team lead of Utah Student Robotics; President of the Undergraduate Student Advisory Committee; Member of National Society for Leadership and Success

## INTERESTS

Rock Climbing since 2019 (V5, 6b+); Practicing drumming since 2023; Hobbyist photographer [pexels.com/@manglemix/](https://pexels.com/@manglemix/)