

## SKILLS

**Familiar Languages:** Java • C • C++ • C# • Python • SQL • HTML/CSS • JavaScript • ARM  
Assembly • Unreal Blueprints • Lua

**Familiar Tools:** JetBrains IDE's (CLion, IDEA) • Visual Studios 2019 • MySQL • Unity • Unreal Engine  
4 • Vim • Linux • Flask • React • GitHub • Perforce • Creation Kit • UNET

## EXPERIENCE & EMPLOYMENT

### PROJECTS – MORE PROJECTS ON GITHUB!

- **The Archon Project** - This **Unreal Engine 4** project is a third-person, rouge-lite, action game built over a semester by a team of 9 students. I worked as an engineer on the project and worked on the game from prototyping all the way to polish and release to itch.io. For this game I specialized in map creation and level streaming, while also assisting in other areas of development.
- **Sword of Atlas** – An ongoing **Unreal Engine 4** TRPG centered around combining the ATB (active time battle) system of FF13 and a grid system of something like Fire Emblem being developed by a team of ~15 people. So far, I've been responsible for a robust Grid and tile system that drives combat and movement. Also implemented helpful algorithms for pathfinding and getting all available movement tiles.
- **Memory Management System** – A built from scratch heap allocator implemented in **C++** that can dynamically store and keep track of memory. I maintained industry standard code and implemented interesting features such as dynamically aligned addresses.
- **Game Engine** – I developed a simple 2d game engine in **C++** that includes an entity component system that manages many complex systems like physics, rendering, collision and more. Currently building another **C++** engine that implements its own meshes, shaders and even loads meshes from Maya. This engine focuses on platform independent code and a lot of how graphics are loaded and rendered.
- **Stream Processing Engine** – A data processing framework that executes queries while consuming an endless amount of data, implemented in **C++**.
- **I.T.O.M.** – Item Trading Over an online Marketplace is a website that allowed players to trade in game Minecraft items over the web and transfer them into their own game. This was a full stack application that even required a TCP connection and networked protocols, implemented in **Java**.

**Software Engineer** • University of Utah – Gapp lab • May 2021 – present

Working on a 9-person team developing VSWT a software package meant to help social workers train their skills. Currently working on rolling out a new phone app VMI.

**Teaching Assistant** • University of Utah • August 2020 – May 2021

Graded and provided feedback to undergraduate EAE students related to course content.

**2Fix Lead Technical Assistant** • Buena Vista University • May 2019 – May 2020

Managed a team of other technical assistants to help diagnose and solve hardware and software issues for teachers and students.

## EDUCATION

**MASTER OF ENTERTAINMENT ARTS AND ENGINEERING – ENGINEERING** • UNIVERSITY OF UTAH • MAY 2022

**BACHELOR OF COMPUTER SCIENCE** • BUENA VISTA UNIVERSITY • MAY 2020 •

GPA – 3.7, Magna cum laude, Dean's List: 2017-2020