
Skills

Languages: C++, C, Python, C#, GML, HTML/CSS

Technologies: Box2D, Arduino, Raspberry Pi, Git, Embedded Servers

Game Dev: Custom engines, Unity, GameMaker

Core Concepts: Physics simulation, rendering pipelines, embedded systems

Education

A.S. General Studies

- NCTC 2024

B.S. Computer Science

- UNT Expected 2027

Projects

2D Fantasy Platformer | Level & Engine Systems

Team Project | C++

- Built a complete level pipeline from authored data to runtime rendering and physics
- Integrated LDtk-authored levels with custom parsing, rendering, and Box2D collision
- Optimized level rendering via camera-based tile culling
- Collaborated with a small team on a custom C++ game engine

Wireless DM-Controlled Magic Compass

Embedded Systems Project | C++ | Arduino

- Developed firmware for a wireless, servo-driven prop device
- Implemented an embedded web server for real-time remote control
- Integrated motor control, LED feedback, and networking on constrained hardware

Wireless DM-Controlled Datapad

Embedded / Application Project | Python | Raspberry Pi

- Designed and implemented all software for a custom handheld touchscreen device
- Built a local web server enabling remote message management
- Implemented persistent storage and GUI systems for live gameplay use

2D Metroidvania Game (Solo Project)

Game Development | GameMaker | GML

- Designed and implemented all gameplay systems and mechanics
- Built a rune-based directional input system for spell casting
- Developed custom UI, animation, and lighting systems