
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
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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
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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
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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