Jaren McHugh

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ABOUT

Developer focused on using low level systems languages to build efficient, high-performance, and mission-critical software with an interest in robotics and embedded programming.

EDUCATION

Texas State University,   *Expected 2027*
Bachelor of Science (B.S.) in Computer Science
- Minor in Engineering

Lone Star College,   *2024*
Associate of Science
- Completed general college coursework

PROJECTS

Rusty Engine   *March-May 2025*
Worked on developing a lightweight, cross-platform, and memory safe game engine for 2D sprite-based rendering using Rust. Implemented a simple Entity Component System utilizing an archetype-based approach with plans to implement an ECS driven architecture for the game loop. Used winit and wgpu packages for memory safety and cross platform compatibility.

React Browser Video Editor   *Feburary 2025*
Utilized React 19 and Vite to design an intuitive front-end user interface for a browser-based video editor application. Developed an API in Rust with Axum to handle back-end video uploading functionality. Intended to integrate FFMPEG for implementing video processing and editing features on the back end.

Nvim Completions   *May 2025*
Used Rust to write a plugin that directly interfaces with Neovim C code by leveraging open source bindings to give IntelliSense or copilot like completions. Planned to use RAG to generate more accurate completions using a SQLite vector database.

TECHNICAL SKILLS

Languages: Rust, Typescript
Frameworks: Sveltekit, React, Tailwind
Packages & Libraries: Serde, Tokio,