Conner Moulaison | connermoulaison.com | hello@connermoulaison.com | 360.961.5549

Self taught programmer interested in low level programming for video games. Currently the System Administrator for a national scale business.

Skills

- Dedicated work ethic and deep curiosity about engineering, math, and logic.
- Solid knowledge of **C, C++, and C#**. Working knowledge of Make, CMake, Python, Rust, and JS.
- Low level programming knowledge including reading and writing **basic Intel x86_64 ASM** and an understanding of **operating systems and GPUs** in the context of game development.
- Able to efficiently work with data using **Excel and SQL** to improve business and software workflows.
- Can reason about the **costs and benefits of abstractions** related to overall program architecture.
- Believes in a strong **interrelationship between game designer and programmer.**

Personal Projects

Crumble King Arcade Game | Written in Odin (a C-like language) using SDL 2 and Miniaudio (**github**)

- Implemented a complete game project without a game engine, including a platform layer, audio synthesis, asset management, and save data.
- Utilized a straightforward, procedural style to identify necessary abstractions iteratively.
- Made an arcade cabinet using an Arduino Micro to connect to a physical control panel. Wrote a separate audio backend to output sound instructions to a SN76489 sound chip.

Cicero Compiled Programming Language | Written in C with NASM assembly backend (**github**)

- Implemented a one-pass recursive descent parser, emitting x86-64 NASM assembly.
- Includes variables, arithmetic with operator precedence, conditionals, and jump instructions.
- Used simple, cache friendly data and procedures for maintainability, memory efficiency and speed.

CPU Path Traced Renderer | Written in C++ using SDL2 without math libraries (**github**)

- Implemented visual features such as reflectivity, metallicity, and transparency.
- Made incremental performance improvements to achieve real time speed at low fidelity.
  (1024×1024 resolution, 4 samples per pixel, 4 max bounces, ~15 fps)

Caravan Strategy Game for Micro Jam 22 | Written in C++ using SDL2 (**github**, **itch.io**)

- Implemented a turn based, trading strategy game without an engine in 48 hours for Micro Jam 22.
- Modeled economic forces such as supply and demand, with the game world responding to procedurally generated forces and player action.

Work

System Administrator | Barlean's Organic Oils | June 2023 - Present

- Started as the only employee in the IT department for a national scale business, systematically triaging the development of documentation, policy, and process standards from scratch.
- Hired, trained, and directly managed a help desk specialist, setting goals and priorities as needed.
- Regularly used SQL, Excel, and other proprietary software to view and modify business data.
- Wrote various software improvements in JS, Python, and a proprietary language for our Sage ERP.