

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

Self taught game programmer deeply interested in algorithms and gameplay constructs. Currently the System Administrator for a national scale business.

## Skills

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- Solid knowledge of **C, C++, and C#**. Working knowledge of Make, CMake, Python, Rust, and JS.
- Low level programming knowledge including reading **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 workflows.
- Can reason about the **costs and benefits of abstractions** as related to an overall game design.
- Strongly believes in a strong **interrelationship between game designer and programmer**.

## Projects

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### **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.

### **Caravan Strategy Game** | 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.

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

- Implemented visual features such as reflectivity, metallicity, and transparency.
- Incremental performance improvement via refactoring brought speed to realtime at low fidelity.  
(1024×1024 resolution, 4 samples per pixel, 4 max bounces, ~15 fps)

### **Vulkan Renderer** | Written in C++ using SDL 2

- Identified industry best practices including modern C++ features and using Khronos validation layer.
- Learned GLSL and used semaphores/fences to produce robustly concurrent code.

## Work

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### **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 manage 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.
- Wrote and deployed an employee portal in Django (a Python web framework) including help desk and knowledge wiki features.