Emma Cross

Software Engineer, Game Programmer

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SKILLS

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| --- | --- | --- | --- |
| PROGRAMMING LANGUAGES | ENGINES | LIBRARIES | SOFTWARE |
| C++ (proficient) | Unity (familiar with) | OpenGL (intermediate) | Visual Studio (proficient) |
| C (proficient) | SFML (intermediate) | Lua (beginner) | Audacity (intermediate) |
| Java (intermediate) |  |  |  |

EDUCATION

**BS in Computer Science in Real-Time Interactive Simulation** Expected Grad April 2024

DigiPen Institute of Technology, Redmond WA 3.6 cumulative GPA

ACADEMIC PROJECTS

**Tech Lead, Graphics Programmer** August 2021 – April 2022

Cooper’s Cleanup – 2D Collectathon Adventure (C++ custom engine)

* Implemented graphics rendering and fog-of-war lighting effects using OpenGL
* Designed art pipeline to give non-programmers the ability to input meshes and textures
* Created dynamic menu system fully editable by game designers via JSON files and Lua scripting
* Conducted programmer meetings, communicated with other disciplines, and managed team documents & work schedule as tech lead

**Gameplay & Tools Programmer** January – April 2021

Hairaiser – 2D Platformer (C custom engine using AlphaEngine)

* Built custom level editor fully usable outside of C++ that allowed teammates to design and iterate upon created levels
* Developed several features including wall, enemy, and decoration placement

**Gameplay Programmer** October – December 2020

Turreting Test – 2D Top-Down Shooter (C using CProcessing engine)

* Developed gun behaviors and water balloon arc trajectories
* Created options menu that supports key/button remapping and window resizing
* Implemented various sound effects using Audacity

PERSONAL PROJECTS

**Engine Developer & Gameplay Programmer (Solo)** May – August 2021

temtris – *Tetris* Clone (C++ custom engine using SFML)

* Developed game using custom engine in C++ with SFML for low-level graphics support
* Systems and GameObjects are editable via JSON files and support saving/loading state
* Designed *Tetris* simulation using a 2D array that is converted to modern graphics