Emma Cross

Software Engineer, Game Programmer

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SKILLS

* C (1 year classwork)
* C++ (1.5 years classwork)
* OpenGL (1 year classwork)
* Java (1 year classwork)
* Unity engine (familiarity)

EDUCATION

**DigiPen Institute of Technology, Redmond WA**

Expected Graduation April 2024

* Working towards a BS in Computer Science in Real-Time Interactive Simulation
* 3.567 cumulative GPA (as of December 2021)
* Designing and developing games with teams of students

ACADEMIC PROJECTS

COOPER’S CLEANUP, DigiPen Institute of Technology, August 2021 – April 2022

2D Collectathon Adventure (C++) - **Tech Lead, Graphics Programmer**

* 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 via JSON files and Lua scripting
* As tech lead, conducted programmer meetings, communicated with other disciplines, and managed team documents & work schedule

HAIRAISER, DigiPen Institute of Technology, January – April 2021

2D Platformer (C) - **Gameplay & Tools Programmer**

* Built custom level editor fully usable in-engine
* Developed several features including wall, enemy, and decoration placement
* Assisted teammates in designing and iterating upon created levels

TURRETING TEST, DigiPen Institute of Technology, October – December 2020

2D Top-Down Shooter (C) - **Gameplay Programmer**

* 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 and FMOD

PERSONAL PROJECTS

TEMTRIS, May – August 2021

*Tetris* Clone (C++)

* 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