Cody Gordon

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Profile

Dedicated and eager to learn software developer with a passion for the games industry. Two to three years of professional quality programming experience in various engines and languages and upwards of 8 years of amateur experience as a hobby. Worked as the sole developer on a team to produce and ship an engaging, educational children's game from a set of learning goals. Gained experience in the indie development workflow through the ongoing process of publishing an independent title.

Technical Skills

Programming Languages

- C/C++
- C#
- Java
- Python
- SQL

Tools and Technology

- Unreal Engine 4/5
- Unity Engine
- Git/Github/Gitlab
- Visual Studio
- AI Algorithms

Education

Bachelor of Computer Science (Honours) Mathematics (Minor)

University of Manitoba, **Achieved: June 2024**

Winnipeg, Manitoba, Canada

Relevant Coursework: Introduction to Artificial Intelligence (COMP 3190), Databases Concepts and Usage (COMP 3380), Database Implementation (COMP 4380), Computer Graphics 1 (COMP 3490), Software Engineering 1 (COMP 3350), AI Honours Thesis (COMP 4522)

Work Experience

Contracted Software Developer   Winnipeg, Manitoba, Canada

Canadian Centre for Child Protection   September 2020 – January 2023

Project Link

- Developed and architected a C++ framework using Unreal Engine 4 following the AGILE methodology to facilitate rapid iteration/prototyping
- Worked with a design team to create and ship a point-and-click adventure style educational experience
- Used an Unreal Engine 4 source build to customize the Emscripten C++ to JavaScript pipeline
- Worked extensively with Unreal Engine 4 Blueprint and widget systems to realize a cohesive narrative

Lead Coding Instructor   Winnipeg, Manitoba, Canada
Code Ninjas Winnipeg   August 2019 – Present

- Worked to facilitate children's education in programming through curriculum supplementation and staff training/coordination
- Developed engaging summer camp curriculum for programming related to game development and the design process
- Instructed students one-on-one with a focus on developing the skills needed for them to pursue their personal projects
- Specialized in assisting advanced and/or struggling students with finding appropriate, attainable, and yet challenging work
- Worked with an administrative team to identify staff – student issues and assist in developing strategies to better facilitate education
- Built rapport with clients resulting in a high rate of sign-ups by developing a deep understanding of their children's engagement level and interest in the programs

Projects

Undergraduate Honours Thesis   Winnipeg, Manitoba, Canada
University of Manitoba   September 2023 – April 2024

Project Link

- Created a simulation in C# using Unity Engine to evaluate multi-agent AI systems for the purpose of a research paper
- Expanded upon existing research by performing a smaller-scope, fine-grained analysis of communication techniques in multi-agent systems
- Implemented Quad Tree based pathfinding and collision prevention algorithms in C#
- Utilized the Software Development Lifecycle concept to maintain an organized and maintainable repository using Git
- Developed system-spanning documentation for the purposes of software reusability in further research

Indie Game Project   **Winnipeg, Manitoba, Canada**

Personal   January 2023 – Present

Project Link • Developing a match-based multiplayer Roguelike using C# and Unity as an individual developer

- Working with the Steamworks partner program and Steam Networking Services to setup a production environment for release
- Utilizing the Software Development Lifecycle and Agile programming methodologies to manage a largely scoped project as an indie developer
- Implemented client-side prediction to smooth fast-paced networked gameplay
- Implemented a class/ability based third-person shooter that is fully network compatible

Procedural Landscape Generator   **Winnipeg, Manitoba, Canada**

Personal   January 2023 – June 2023

Project Link

- Developed a Perlin Noise based procedural landscape generator using C# and Unity Engine
- Added functionality to include procedural room/tile generation and maze generation
- Utilized linear algebra and 3D geometry to construct meshes in real time for landscape and landscape features dynamically on the vertex level
- Implemented object pooling techniques to facilitate fast procedural foliage generation and placement

Game Jams

Winnipeg Game Jam (Participant) - i-beelieve-i-can-fly - Unity C#

JameGam 27 (Participant) - sky-swap - Unity C#

2022 Epic Mega Jam (Participant) - breaking-point - Unreal Engine C++/Blueprint

2021 Epic Mega Jam (Participant) - tile-town - Unreal Engine C++/Blueprint

The Completion Jam (Participant) - simply-misunderstood - Unity C#