Cody Gordon

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Profile

Dedicated and eager to learn computer science student with a passion for game development. Over eight years of amateur game design and programming experience in various engines and languages with a particular speciality in C++ and Unreal Engine. Worked as the sole developer on a team to produce 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.

Education

Bachelor of Science (Honours) Computer Science (Minor) Mathematics

University of Manitoba, **Expected: April 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

- Contracted to create an educational, interactive experience for children promoting online safety
- Created and pitched a project proposal with several tiers to provide flexibility regarding the scale and cost of the project
- Developed a C++ framework in Unreal Engine 4 to facilitate rapid iteration/prototyping
- Worked with a design team to create 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

- Created a simulation in C# using Unity Engine to evaluate a multi-agent AI system 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 algorithms in C#
- Utilized the Software Development Lifecycle concept to maintain an organized and approachable 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

- Developed a 4v4 match-based multiplayer experience using C++ and Unreal Engine 4 as an individual developer
- Utilized concepts from both the Real Time Strategy and First-Person Shooter genres to create a unique gameplay experience
- Worked with the Steamworks program and Steam Networking Services to setup a production environment for release
- Converted the codebase to follow the Software Development Lifecycle and Agile programming methodologies

Procedural Landscape Generator — Winnipeg, Manitoba, Canada

Personal — January 2023 – June 2023

- Developed a Perlin Noise based 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 build meshes for landscape and landscape features on the vertex level
- Added object pooling techniques to facilitate procedural foliage generation and placement

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

Game Jams

JameGam 27 (Participant) - sky-swap
2022 Epic Mega Jam (Participant) - breaking-point
2021 Epic Mega Jam (Participant) - tile-town
The Completion Jam (Participant) - simply-misunderstood