# 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.

## 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 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

**Project Link**

- Developed a C++ framework in Unreal Engine 4 to facilitate rapid iteration/prototyping
- Created and pitched a project proposal with several tiers to provide flexibility regarding the scale and cost of the project
- 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

**Project Link**

- 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

**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

### Procedural Landscape Generator — Winnipeg, Manitoba, Canada

Personal — January 2023 – June 2023

**Project Link**

- 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

## Game Jams

Winnipeg Game Jam (Participant) - i-beelieve-i-can-fly
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