

Work Experience

Game Programmer (Unity) 🎮

Oakville, ON

RESEARCH | ARCHIPELAGO OF DESIGN

October 2024 – Current

- Collaborated with a **multidisciplinary team** on Inner Alliance, a DEI-focused educational strategy game for military organizations,
- Developed a procedural hex-based gameplay system using **voxelization, custom mesh generation, and shader techniques** to support varied environments.
- Architected core game systems using **MVP architecture and SOLID principles** to build maintainable, scalable systems.
- Created in-editor tools for efficient content creation, enabling rapid iteration by designers and researchers.

Backend QA Systems Analyst

Toronto, ON

INTERNSHIP | PROOFPOINT

May 2020 – August 2021

- Contributed to the backend testing team for a large-scale mail security platform, focusing on **validating backend microservices**
- Wrote **custom software tools** to simulate production scenarios and automate backend testing workflows.
- **Spearheaded QA on a new project**, taking ownership of end-to-end testing, regression, and performance for a product hosted on a new platform. Led meetings to discuss strategies, **fostering cross-disciplinary collaboration**.
- Developed a highly configurable, **multi-threaded WPF Bulk Mail tool**, replacing legacy systems and accelerating testing workflows by up to 300%.

Projects

Ubisoft Next 2024 (Individual) 🎮

C++, OpenGL

3D, TURN BASED, STRATEGY GAME THAT PITS YOU 1V1 AGAINST ANOTHER PLAYER AMIDST A DYING STAR.

- Built a **custom 3D rendering engine** using OpenGL and a line-drawing API with projection, culling, and meshes
- Implemented advanced engine features including **vertex shading, collision detection, and a particle system**, enhancing visual quality and gameplay interactivity.

Dungeon Company (Technical Lead) 🎮

Steam, C#, Unity

A ROGUE-LIKE CARD BATTLER WITH THOUSANDS OF DOWNLOADS AND POSITIVE REVIEWS ON STEAM

- Authored **technical proposals, system diagrams, and architecture plans** focused on event-driven design and reducing coupling through clean, pattern-driven solutions
- **Managed a team of 4 programmers** across gameplay and UI, organizing sprint planning, assigning tasks via a Kanban board, and hosting weekly meetings
- Collaborated with design, art, and production leads to define scope, establish pipelines, and align on project goals

Education

Sheridan College

Oakville, ON

COLLEGE GRADUATE CERTIFICATE IN ADVANCED GAME PROGRAMMING

Sep 2023 – Jun 2024

Teaching Assistant for Computer Math I and tutor for Advanced Game Programming

University of Toronto Mississauga

Mississauga, ON

HONOURS BACHELOR OF SCIENCE IN COMPUTER SCIENCE

Sep 2017 – Jun 2022

Web Developer for the Digital Enterprise Management Association and the CCIT (Com. Tech) Department

Skills

- Graphics & Math:** Expert in linear algebra and 3D rendering pipelines for game engines. Proficient in designing shaders (Phong lighting), normal/cube mapping, and advanced mathematical transformations like projection matrices and quaternions. Applied culling, clipping to optimize rendering performance.
- Gameplay Systems:** Design scalable and flexible game systems like inventories and dialogue. Developed AI-based enemy combat systems using state machines and behavior trees.
- Programming:** C++ (1 year), C# (3 years), JavaScript (3 years), HLSL (1 year)
- Software:** Unity (2 years), Visual Studio (3 years), Git (5 years), Jira (1 year)

Awards

- Mar 2024 **Ubisoft NEXT Finalist**, Independent C++ **game built within 72 hours**, recognized for advanced 3D graphics rendering and innovative gameplay. Ubisoft
- Aug 2024 **Gaming Garage 2nd Best Game & 2nd Best UI**, For excellence in user interface design and engaging game mechanics. CNE