Adriano Mazzucco

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Innovative and results-driven **Software Engineer** specializing in **game development**, **engine architecture**, and **AI systems**. Proficient in **C++**, **C#**, and **Unreal Engine 5**, with hands-on experience building custom engines using **Entity Component System (ECS)** and **Mixin Design Patterns**. Adept at developing gameplay mechanics, graphics systems, and AI behaviors. Passionate about creating immersive experiences and continuously expanding technical expertise.

RELEVANT PROFESSIONAL EXPERIENCE

Gameplay Programmer   May 2023- August 2023
Always Snacking Studio- Sheridan College   Toronto, ON

- Working with a team to make a RTS game for our capstone project
- Implementing the Mixin design pattern to build a data-driven system to create modular gameplay features
- The Project can be found here: https://always-snacking-studios.itch.io/the-big-vs-them-all

Data Analyst   May 2020- August 2020
Kubra   Toronto, ON

- Registered print jobs through proprietary Kubra software.
- Made changes to code to resolve errors using C++ and visual basic

Software Engineer   September 2018 - April 2019
Toronto Metropolitan Univesity   Toronto, ON

- Developed a cloud-based power-flow assessment tool as my capstone project
- Worked with JavaScript to create front end for power flow tool
- Published a technical document with IEEE: https://ieeexplore.ieee.org/document/9025140

Software Engineer   September 2016 - December 2016
Stock Render   Toronto, ON

- Worked with a startup team to develop stock processing website
- Developed JavaScript algorithms to analyze and organize data from a SQL database

EDUCATION

Game Development Advanced Programming (Graduate Certificate)   October 2023
Sheridan College   Oakville, ON

- Game Engine Architecture, ECS in C++, Unity Gameplay, UI, and AI Systems, Implemented A*, Behavior Trees, Mini-Max, FSMs.

Bachelor of Engineering, Computer Engineering   June 2019
Toronto Metropolitan University   Toronto, ON

- Software Architecture, Image Processing, Networking, Embedded Programming, Database Systems, Linear Algebra, Calculus

CORE SKILLS AND ACHIEVEMENTS

- **Programming Languages & Tools-** C++, C#, C, Unity, Unreal Engine 5, OpenGL, HLSL, GLSL, SFML, Visual Studio, Git, Perforce
- **Game Development & Architecture-** Entity Component System (ECS), Mixin Design Pattern, Game AI: A* Pathfinding, Mini-Max with Pruning, Behavior Trees, FSMs, Graphics Programming & Shader Development
- **Software Engineering & Systems-** Software Architecture, Advanced Algorithms, Networking & Network Security, Embedded Systems, Database Design
- **Soft Skills-** Problem Solving, Creativity, Team Collaboration, Time Management, Self-Motivation, Communication
- **2nd Place, Ubisoft Next Programming Competition (2023):** Developed a C++ ECS engine, 3D math library, and Bomberman-style game over a weekend.
- **Toronto Hydro Student Award (2018–19):** Led a team to build a real-world web application prototype for Toronto Hydro.
- **Gold, Ryerson Capstone Design Project Excellence Award (2019):** Delivered the top capstone project in Ryerson Engineering.