YOUSSEF BEN MOUNY

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EDUCATION

McGill University **August 2024 - May 2028**
Bachelor's, Software Engineering *GPA: 3.84*
- Relevant Coursework: Prog. Languages & Paradigms, Model-based Programming, Fundamentals of Software Eng., Intro to Software Systems (Linux & C), Computer Organization, Algorithms and Data Structures

Vanier College **August 2022 - June 2024**
Associate's, Computer Science *GPA: 34.6*
- Dean’s Honor Roll

PROJECTS & OUTSIDE EXPERIENCE

AI Car Driver - *Link to project*
Vanier College - Java Programmer
- Collaborated with a team of 3 and completed the project in under 1 month using JavaFX.
- Developed an AI-driven educational tool demonstrating how physics and Artificial Intelligence can integrate to create automation systems, fostering interactive learning.

Unreal Shooter - *Link to project*
- Developed a 3D FPS prototype in Unreal Engine 5.6, implementing C++ gameplay systems for character mechanics, combat, and modular player abilities.
- Implemented enemy AI using custom C++ AIController and BehaviorTree architecture, authoring bespoke BT_Task nodes for decision-making and combat actions.
- Leveraged Unreal Engine’s Blackboard system to feed perception and world-state data into AI decision trees, enabling modular and scalable combat behaviors.

C++ Retro Pong Engine - *Link to project*
Retro-styled 2D ping pong game & engine from scratch (Win32 API, C++)
- Designed and implemented a 2D game engine from scratch in C++, handling the game loop, rendering, input, and collision detection using native Win32 APIs (no third-party game engine)
- Built a modular entity/component architecture, managing game objects (ball, paddles, UI buttons) with proper OOP design and utility systems along side efficient macros.
- Developed a probabilistic selection between multiple AI opponent modes and a UI for selecting PvE, PvP, and dynamic match configurations (1v1, 2v2), demonstrating AI logic and adaptive game control

Tank Trouble 3D - *Link to project*
Early/Planned Steam/Epic store release
- Extended Unreal Engine C++ gameplay framework by implementing custom GameMode and PlayerController inheriting classes to manage match flow, player input, and game state logic.
- Implemented Unreal Engine’s Enhanced Input system in C++, defining Input Actions and Mapping Contexts to support scalable, remappable player controls.
- Designed scalable game systems with future content pipelines in mind, targeting release on Steam and Epic Games Store (summer 2026) to demonstrate product-level development experience.

TECHNICAL SKILLS

Programming Languages: Java, C/C++, HTML/CSS, Python, JavaScript, C#, .NET Framework, Bash
Tools and Technologies: Unreal Engine, Git, jQuery, JavaFX, Data Structures & Algorithms, Github, Unity, Linux/Unix, Vim
Methodologies and Practices:: Game Development, REST APIs, Microsoft Azure, Agile
Soft Skills: Leadership, Team Collaboration, Innovative Thinking, Problem Solving
Databases: T-SQL, SQLite
Certifications: Udemy: Learn C++ & Make Video Games
Languages: French, Spanish, Japanese, Arabic, English

SOFTWARE EXPERIENCE

CSSDM **Montréal, Canada**
Full-Stack Software Engineering Intern *May 2025 - August 2025*
- Improved UI design in C# to enhance client engagement (~60% attention retention) Optimized T-SQL queries with secondary keys, reducing table retrieval times by 30%
- Automated database updates and applied RESTful API conventions to streamline backend communication
- Gained exposure to CI/CD deployment workflows used in delivering 10+ secure production releases via Microsoft DevOps pipelines.