

Xuan Hoang Ha

Oakville, ON

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TECHNICAL SKILLS

Languages: C++, C#, Java, Python, JavaScript, HTML, CSS

Frameworks: ASP.NET Core, Spring Boot, Next.js, Angular

Game Engines & Graphics: Unity, Unreal Engine, MonoGame, OpenGL, SDL2, GLSL

Tools: Git, Helix Core, Docker, Visual Studio, VSCode, IntelliJ, Microsoft Office Suite

EDUCATION

Sheridan College

Honours Bachelor of Computer Science minor in Game Engineering

Oakville, Ontario

Sep. 2023 – April 2027

- **Relevant Coursework:** Game Engine Architecture, Computer Graphics and Animation, Game Tools and Data Driven, Data Structures and Algorithms, Enterprise Software Systems.

PROJECTS

2D Platformer Game | C++, SDL2

Jan. 2025 - Dec. 2025

- Developed a 2D platformer game using **C++ and SDL2**, featuring player movement, physics-based collision detection, and sprite animation rendering.
- Applied an **Event-Driven Architecture** to handle user inputs, maintain 60 FPS gameplay, and reduce frame latency by **15%**.
- Utilized **Object-Oriented design patterns** with **Component-Based Entity Systems (ECS)** to modularize gameplay objects and improve scalability.
- Implemented **Delta time** in the main loop to ensure consistent performance across variable frame rates.

Graphic Shader | C++, OpenGL, GLSL

Sep. 2025 - Dec. 2025

- Engineered custom **vertex and fragment shaders** to simulate real-time lighting and surface reflections.
- Implemented **Phong shading**, **texture mapping**, and **normal mapping** to enhance visual realism.
- Utilized **Vertex Buffer Objects (VBOs)** and **Vertex Array Objects (VAOs)** for optimized GPU data transfer, improving frame rendering time by **20%**.
- Configured and **tuned shader uniforms** to dynamically adjust color intensity and specular highlights based on light direction.

BIABanking | C#, ASP.NET Core, EF Core, SQLite

Oct. 2025 – Dec. 2025

- Designed and developed a banking system using **ASP.NET Core**, supporting account management, financial transactions, and KYC workflows.
- Secured financial and admin operations using **JWT authentication** and **role-based authorization**, enforcing access rules at the controller level.
- Persisted and audited transactional data using **EF Core + SQLite**, and deployed Dockerized services on **AWS EC2** behind an **Nginx reverse proxy**.

LEADERSHIP EXPERIENCE

Event Coordinator

Sep. 2024 – Present

Vietnamese Student Association, Sheridan College

Oakville, Ontario

- Organized and supported student events with 20–40+ attendees, ensuring smooth execution.
- Engaged with participants to foster a positive and inclusive community environment.
- Promoted events through social media and campus outreach to increase participation.

ADDITIONAL INFORMATION

Interests: Passionate about video games and game development; enjoy discussing game design and new technologies in the games industry.

Languages: English, Vietnamese