Xuan Hoang Ha

Oakville, ON

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TECHNICAL SKILLS

Languages: C++, C#, Python, Java, HTML, CSS, JavaScript
Frameworks & Engines: OpenGL, SDL2, Unity, Unreal Engine, MonoGame, Spring Boot, ASP.NET Core, Angular, MySQL
Software: Visual Studio, Git, Microsoft Office Suite (Word, Excel, PowerPoint, Outlook)

EDUCATION

Sheridan College   Oakville, Ontario
Honours Bachelor of Computer Science minor in Game Engineering   *Sep. 2023 – April 2027*
- **Relevant Coursework**: Game Engine Architecture, Computer Graphics and Animation, Gameplay Programming, Data Structures and Algorithms.

PROJECTS

2D Endless Game | *C++, SDL2*   Jan. 2025 - April. 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.

Game Tool Development | *C#, MonoGame*   Sep. 2025 - Dec. 2025
- Designed and programmed a **custom game content tool** in C# and MonoGame to support efficient asset and gameplay setup.
- Implemented an **asset import pipeline** for **terrain shader and texture importing**, allowing users to preview materials in real-time.
- Built a **prefab creation system** that allows designers to assemble reusable objects with configurable components.
- Optimized editor **UI/UX** with custom panels, **drag-and-drop interfaces**, and real-time scene updates to improve productivity.

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