

# Alexandre Brochu

SOFTWARE DEVELOPER · GAME PROGRAMMER

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## Education

### Sherbrooke University

Quebec, Canada

B.S. IN COMPUTER SCIENCE

Sep. 2012 - Aug. 2015

- Received excellence letters from the Dean twice for semesters with 4.3 average GPA
- Received overall GPA of 4.06
- Studied algorithms, compute graphics, artificial intelligence, parallel programming and functional programming

## Skills

**Programming** C++, C#, Typescript, Ruby(Ruby on Rails), Python, Racket, LaTeX

**Game Engine** Unreal Engine 4, Unity3D, Godot, DromEd

**Development Tools** Visual Studio, Visual Studio Code, Rider for Unreal Engine, Neovim, CMake, GDB, Ninja, JIRA, Jenkins, Git, Perforce, MongoDB

**Languages** French, English

## Experience

### Behaviour Interactive

Montreal, QC

UNREAL DEVELOPER

Nov. 2019 - Present

- Working with Unreal Engine 4 game engine
- Writing game logic and tools (using both C++ and Blueprints)
- Shipping a game project on a new and recent platform (Stadia)
- Working on some graphics programming related tasks
- Gaining experience with a successful game's LiveOps

### Behaviour Interactive

Montreal, QC

UNITY3D DEVELOPER

Jun. 2016 - Nov. 2019

- Writing game logic for multiple systems (AI, Animation, UI, Backend)
- Shipping 2 game projects on multiple platforms (Android, iOS, Steam)

### Fuel Industries

Ottawa, ON

UNITY3D DEVELOPER

Jul. 2015 - Jun. 2016

- Writing shaders for game with higher graphic complexity
- Developing game on Android and iOS platforms

### Square Enix Montreal

Montreal, QC

GENERAL PROGRAMMER

May. 2014 - Aug. 2014

- Working in an internship environment
- Adding functionalities to some game project based on specifications

## Personal Projects

GPU BASED RAY TRACING ENGINE IN C++ WITH DIRECTX 11

- Learning the inner workings of the DirectX 11 graphics API to communicate rendering commands to the GPU
- Practicing writing some C++ logic to transfer data from the main memory to the GPU memory to create dynamic scenes
- Learning about how compute shaders can help getting better performance for the ray tracing process rather than implementing the full algorithm in pixel shader

VIDEO GAME PROJECT BASED ON THE BOARDGAME "SEQUENCE" USING UNITY3D

- Learning to organize ideas and plan to complete a video game project with a small team of hobbyists
- Implementing a client/server architecture for multiplayer gameplay over the network from scratch with C# as a separate program
- Performing play test sessions with some people from outside the development team to gather feedback on how to improve the game's experience