Robin Leman

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WORK EXPERIENCE

Respawn Entertainment - Electronic Arts (EA) July 2023 - Present
Gameplay Engineer - Star Wars FPS *Vancouver, Canada*

- Developed core gameplay systems for a Star Wars FPS game in UE5, focusing on player's controls, movement, camera and combat mechanic; enhancing player feel, responsiveness and mobility.
- Built and maintained performant and scalable weapon and combat systems, utilizing a data-driven, action-based framework; allowing for quick iteration and prototyping.
- Designed a data-driven damage pipeline as a foundation for an extensive armor and status effect framework.
- Optimized gameplay and animation systems, improving memory and time efficiency during a critical milestone.

Relic Entertainment - SEGA June 2022 - June 2023
Associate Programmer - Gameplay Systems *Vancouver, Canada*

- Fixed and maintained gameplay and animation code, shipping *Company of Heroes 3* on PC and consoles.
- Implemented performant data-oriented gameplay systems in an ECS architecture, utilizing the EnTT library.
- Designed QuadTree and State Machine data structures, concurrently simulating 1600+ entities in UE5.
- Maintained and optimized by 25%+ StateTree systems in a multi-threaded environment.

The Coalition - Microsoft Xbox May 2021 - August 2021
Software Engineer Intern - Engine Team *Vancouver, Canada*

- Built testing and debugging tools for the Unreal Engine 5 physics and core system.
- Profiled and assessed UE5's Chaos and Nanite systems to measure their performances on Xbox and PC.
- Implemented procedural collision volumes and Ragdoll states, cooperating with the Physics Team.

Ubisoft June 2020 - August 2020
Gameplay Programmer Intern - Unannounced Game *Montreal, Canada*

- Designed a 60 FPS voxel based buoyancy simulation algorithm in C++ with Havok in an ECS architecture.
- Implemented visualization tools to improve testing and debugging workflows for Snowdrop Engine.

EDUCATION

McGill University September 2019 - May 2022
B.S. in Physics and Computer Science. GPA: 3.82/4.00 *Montreal, Canada*

SKILLS

Programming Languages: C++, Python, C#, C, Java, Bash
Tools: Unreal Engine 5, Unity, OpenGL, GLSL Shaders, Blender, Perforce, Git, CSS, HTML
Languages: English, French (Bilingual)

PERSONAL PROJECTS

Debris Disk Simulation | C++, OpenGL, GLSL Shaders

- Developed a real-time 3D rendering engine with OpenGL to visualize debris disks in solar systems.
- Optimized the engine with multi-threading and GPU programming to support different scattering functions.

Achilles | 3D Physics Engine - C++

- Designed a real-time Physics Engine in an Entity-Component-System architecture.
- Implemented dynamics, collision detection and response, softbody simulation for ropes and clothes.

LEADERSHIP & VOLUNTEERING

GameDev McGill | President (2021-2022), VP Internal (2020-2021), Member (2019-2020)

- Led a team of 10 executives to organize events for 150+ members of a game development club.

Red Cross | Volunteer (June 2021 - June 2022)

- Emergency responder volunteer. Certified "Emergency First Aid CPR - Level C".