Paul Godbert

3D Programmer — Real-Time Graphics & Physics

(579) 421-6482 | p.godbert@laposte.net | linkedin | github | itch.io

Profile

3D Programmer specialized in real-time rendering and physics simulation, with experience building performant systems for games and research prototypes. Focused on developing robust, scalable engine features that integrate cleanly with gameplay and artistic workflows.

Education

M.Sc. Computer Science — Computer Graphics Sept. 2024 – Aug. 2026
Université de Montréal (Supervised by Pr. Pierre Poulin) *Montréal, QC*

University Exchange — Computer Science Sept. 2023 – May 2024
Université de Montréal *Montréal, QC*

Bachelor of Computer Science — International Curriculum Aug. 2021 – June 2024
Université de Bordeaux *Bordeaux, France*

Technical Skills

Programming

- **Languages:** C, C++, C, Python, HLSL, GLSL, SLANG
- **Graphics APIs:** Vulkan, OpenGL
- **Engines:** Unity, Godot, custom engines

Real-Time Graphics & Engine Systems

- Physically-based rendering, ray/path tracing, volumetric rendering
- Real-time rendering, post-processing, ray-marching
- GPU programming (compute shaders, custom particle systems)
- Engine architecture, tooling, and performance optimization

Simulation & Physics

- Real-time fluid simulation (Shallow Water, Position-Based Fluids)
- Numerical methods for interactive simulations

Professional Experience

R&D Intern — Engine / Rendering Programmer June 2025 – June 2026
Ubisoft LaForge (Rendering & World Building Team) *Montréal, QC*

- Designed and implemented a real-time shallow water simulation system interacting in real-time with the environment under engine-level performance constraints.
- Extended the simulation with additional physical effects and stability improvements to enhance visual realism in gameplay contexts.
- Integrated the system into a real-time rendering pipeline, ensuring compatibility with engine architecture and workflows.
- Optimized CPU/GPU performance to meet real-time frame budgets while maintaining visual fidelity.
- Collaborated with researchers and engineers to prototype and evaluate techniques for production use.

Projects & Game Development

- Developed multiple games and prototypes since 2014 using Unity and Godot focusing, on gameplay systems and rendering.
- Participated in 10+ game jams (Global Game Jam, Ludum Dare, Brackeys), rapidly building complete and polished experiences under tight constraints.
- Winner of ETS Montréal rendering competition for a path tracer featuring heterogeneous volumetrics, importance sampling and portal-based scene transport.
- Teaching Assistant for IFT-3355 (Computer Graphics), mentoring students on rendering and real-time graphics concepts.