Paul Godbert

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EDUCATION

Master's degree in computer science, specializing in computer graphics	Sept. 2024 – May 2026
Université de Montréal	*Montréal, QC*
University exchange as part of a degree in computer science	Sept. 2023 – May 2024
Université de Montréal	*Montréal, QC*
Bachelor's degree in computer science, international curriculum	Aug. 2021 – June 2024
Université de Bordeaux	*Bordeaux*

SKILLS

Computer Graphics

- **Photorealistic rendering:**
  In-depth knowledge of the standard rendering pipeline and experience in programming path/ray tracers supporting classic PBR materials, importance sampling and volumetric rendering.(**C, C++, Rust**)
- **Geometry:**
  Differential geometry and its applications in computer graphics : **subdivision, deformation, smoothing, heat diffusion, Laplacians, ...**

GPU Programming

- **Image denoising:**
  Parallelization of an image denoising program. (**CUDA C**)
- **Graphics Programming:**
  Real-time-optimized graphics effects and post-processing. Implementation of a real-time ray-marcher on GPU. (**HLSL, GLSL, ShaderLab, Compute Shaders**)

ML

- **Fundamentals in machine learning:**
  Implementation of common models such as **CNN, SVM, MLP (Python, ScikitLearn, PyTorch)**
- **Neural Geometry:**
  Study of deep learning applied to geometry, including an in-depth review of state-of-the-art techniques (**MeshCNN, DiffusionNet, NMC, NDC, ...**)
- **CCAI Summer School:**
  Summer school supported by Google covering the implementation of various models applied to the preservation of the environment and climate (classification of sound signals, prediction of meteorological phenomena, etc.).

Game Development

- **Game Engines:**
  Advanced knowledge of several game engines such as **Unity** or **Godot**. Realisation of realtime graphic effects, tooling and game systems for these engines.
- **Architecture:**
  Setting up complex, scalable architectures for projects of varying scope.

PERSONAL EXPERIENCES

- programing and developing video games since 2014 as well as taking part in numerous Game Jams over the years(Global Game Jam, Ludum Dare, Brackeys Game Jam, Trijam, ...).
- Participating in Ubisoft GameLab Contest.
- Winner of the final competition of the photorealistic rendering course at ETS Montréal. Path Tracer with heterogeneous volumetric rendering, envmaps importance sampling, stratification and simulation of portals between two scenes.

LANGUAGES

French - Mother Tongue.
English - Fluency in written and spoken English. (TOEIC: B2)