Patrick Attiment

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Experience

Graphics Engineer Intern

Grenoble, France

CORYS

June 2024 - Sept 2024

• Shader development using Unreal Engine's render dependency graph to enhance the windscreen effects system in the CORYS train simulator

Gameplay Programmer - Voluntary

Jan 2024 - June 2024

BFME-Reforged

- BFME-Reforged is a community project to recreate the Battle for Middle-Earth (BFME) games by EA
- Under the lead developer's guidance, I implemented new gameplay features with Unreal Engine 5 and C++

Projects

- Physically based GPU path tracer developed from scratch in C++ and CUDA
- It implements a range of advanced rendering techniques including microfacet material models, sampling techniques (BSDF importance sampling, next event estimation, multiple importance sampling), and GPU optimizations (wavefront path tracing, dynamic ray fetching, compressed wide BVHs)

Zendite Engine stokastx/ZenditeEngine

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- o Small scale game engine developed in C++ and OpenGL
- I was part of a team and implemented the rendering system (shading, lighting system, and shadow mapping)

Education

Grenoble INP - UGA Grenoble, France

MSc in Computer Science (double degree)

Sept 2024 - June 2025

- Major: Artificial Intelligence for Graphics, Interaction, Vision and Robotics
- o Coursework: Advanced Computer Graphics, GPU Computing, Computer Vision, Robotics

Grenoble INP - Ensimag

Grenoble, France

Engineer's Degree in Computer Science and Applied Mathematics

Sept 2022 - June 2025

• Three-year program in one of France's leading engineering schools, specializing in computer science and applied mathematics

Chalmers University of Technology

Göteborg, Sweden

 $Exchange\ Semester\ -\ Computer\ Science$

Jan 2024 – June 2024

o Coursework: Advanced Computer Graphics, Game Engine Architecture, Machine Learning

Lycée Chateaubriand

Rennes, France

Mathematics, Physics

 $Sept\ 2020-June\ 2022$

- $\circ~$ Two-year intensive program preparing for competitive exams to enter France's top engineering schools
- o Coursework: Mathematics, Physics, Engineering Sciences

Skills

Graphics - GPU Programming: CUDA, OpenGL, GLSL, HLSL

Physically Based Rendering: Linear Algebra, Probability Theory, Sampling Techniques, Light Transport Theory, Material Models, Ray Tracing

Programming Languages: C, C++, Java, Python, Kotlin

Video Game Development: Unreal Engine

Interests

Sports: Soccer (8 years), Ski, Badminton

Music: Piano (6 years)