Wilhem Barbier

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Education

2020-2022 **ENSIMAG: Mathematical modeling, vision, graphics and simulation track**, Grenoble, (≈ master's degree in Computer Science).

2020 **Licence in Mathematics and Computer Science**, *Université Paul Sabatier*, Toulouse.

Experience

Internships

June-September 2021 **Lipsync animation generation**, *YAAARGames/ZEILT Productions*.
I worked on generating lipsync animation from audio and text. I also helped on a production on rendering issues, pipeline automation, and other tasks.
Skills: C#/Unity, Python/Maya

January-May 2021 **Part-time research project on real-time GI**, *Maverick lab, INRIA Grenoble*.
I implemented a real-time global illumination method based on lightmap interpolation. I was supervised by Cyril Soler (INRIA Grenoble) and collaborated with Laurent Belcour (Unity Grenoble).
Skills: C++, rendering research

January-August 2020 **Efficient sampling of energy transitions in the atmosphere**, *STORM lab, Institut de Recherche en Informatique de Toulouse*.
I developed an algorithm to efficiently sample the energy transitions occurring in the atmosphere. It was used to accelerate the convergence of a Monte Carlo estimator of atmospheric absorption.
Skills: C++, Monte Carlo estimation, algorithmic thinking, independent research

Summer 2019 **Retina Pictonique project**, *SMAC lab, Institut de Recherche en Informatique de Toulouse*.
I contributed to the development of an interactive exhibition.
Skills: Java, GUI programming, shader programming

Personal projects

C++ Real-time renderer (OpenGL)
Features: PBR, deferred shading, normal mapping, image-based lighting

C++ Path tracer
Features: BVH, next-event estimation, multiple importance sampling

Skills

Languages: C, C++, Java, Python, GLSL

OpenGL

Tools: Unix, git, LaTeX

Languages

French Mother tongue

English Professional