Wilhem Barbier

Education

2020-2021 Second year at ENSIMAG in the Mathematical modeling, vision, graphics and simulation track, Grenoble, (≈ first year of master's degree in Computer Science).

2020 Bachelor's degree in Mathematics and Computer Science, Université Paul Sabatier, Toulouse.

2017 High school diploma.

Experience

Internships

January- Efficient sampling of energy transitions in the atmosphere, August STORM lab, Institut de Recherche en Informatique de Toulouse.

2020 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 the atmospheric absorption.

Skills: C++, Monte Carlo estimation, algorithmic thinking, independent research

Summer Retina Pictonique project, Laboratoire SMAC, Institut de Recherche 2019 en Informatique de Toulouse.

I contributed to the development of an interactive exhibition in partnership with two artists.

Skills: Java, GUI programming, shader programming

Personal projects

C++ Real-time renderer (OpenGL)

 $Features:\ PBR,\ deferred\ shading,\ normal\ mapping,\ image-based\ lighting\ \texttt{https://github.com/wbrbr/realtime}$

C++ Path tracer

Features: BVH, next-event estimation, multiple importance sampling https://github.com/wbrbr/pathtracer

Skills

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

OpenGL

Tools: git, LATEX

Languages

French Mother tongue

English Professional