Erfan Momeni Yazdi

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Graphics Programmer

Master's student in Signal Processing and Machine Learning with a strong passion for programming. Advanced knowledge of C++ and graphics programming. Logical and professional with excellent problem-solving and communication skills.

Work Experience

Research Assistant — Sep 2022 – Present
Tampere University — *Tampere, Finland*

- Developed and enhanced TauBench, a specialized benchmarking tool targeting temporal reuse algorithms, addressing numerous issues, and implementing improvements, resulting in the successful release of TauBench 1.1 (Link)
- Studied ray tracing concepts such as Monte Carlo estimation, Multiple Importance Sampling and acceleration structures
- Researched real-time stochastic lightcuts method used for rendering scenes with many dynamic lights
- Currently designing the next version of TauBench

Education

Tampere University — Tampere, Finland
Master of Science: Signal Processing And Machine Learning — *Sep 2022 – Present*

K.N. Toosi University of Technology — Tehran, Iran
Bachelor of Science: Computer Engineering — *Sep 2016 – Aug 2021*

Projects

Syndra — *C++, OpenGL, Git, RenderDoc, ImGui* — Source Code

- Designed and developed a physically based Real-Time rendering Engine using OpenGL API and C++
- Implemented Rendering Algorithms such as Deferred and Forward Plus Rendering
- Developed an editor for the engine with different component editors
- Demo video link

Tauray — *C++, Vulkan, CMake, Git, Path-tracing, Linux* — Source Code

- Integrating FSR2.2 upsampling algorithm in the renderer (in progress)
- Minor improvements

Lucin — *C++, Git, Path-tracing, Multi-threading* — Source Code

- Implemented a simple multi-threaded CPU Path Tracer with C++

Technical Skills

Languages	:	C++, C#, Python, Java, x86 assembly
Graphic APIs	:	OpenGL, Vulkan, DirectX(familiar)
Libraries	:	ImGui, Assimp, CMake, SDL, GLFW, Premake
Dev Tools	:	Visual Studio, Git, Github, Gitlab, RenderDoc
Softwares	:	Blender, Unity, Unreal Engine

Selected Courses

- Computer Graphics (5/5)
- Parallel Computing (OpenMP, OpenCL, SIMD) (4/5)