TIMETHY Hyman

Graphics Programmer

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timethyh.github.io

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TECHNICAL SKILLS

Programming Languages
C++, Rust, GLSL/HLSL

Graphics APIs
DirectX 12, Vulkan, OpenGL

Platforms
Playstation 5, PC, VR

Rendering Techniques
Ray Tracing, Deferred Rendering, PBR

Game Engines
Unreal Engine, Godot, Custom Engines

Advanced Topics
Volumentric Rendering, DLSS, Engine Development

LANGUAGE

English
Dutch
Papiamentu
Spanish

OTHER ACTIVITIES

Volleyball Coach
at Breda Univeristy of Applied Sciences where i help train the univeristy team

Piano
as a hobby, always working on learning new pieces

Side Projects
where I explore new rendering techniques and try out different graphics programming ideas

ABOUT ME

I'm a 3rd year graphics programming student at Breda University of Applied Sciences who loves working on rendering engines and graphics technology. I enjoy diving deep into the math behind graphics and learning new techniques. Right now I'm at Traverse Research where I get to research and implement modern rendering methods. I have solid experience building custom engines from scratch and extending existing ones like Godot.

WORK EXPERIENCE

Graphics Programming Researcher
Traverse research
Current position

Working on research and development of advanced rendering techniques. I focus on implementing new algorithms and optimizing real time rendering pipelines using DirectX 12 and Vulkan. Get to work on cutting edge graphics tech and see it come to life.

DirectX 12 | Vulkan | Real time Rendering | Research

Snipes supervisor & assistant
SNIPES Tilburg & Breda
2020-2025

EDUCATION

Bachelor of Science in Graphics Programming
Breda University of Applied Sciences
3rd Year Student

Focused program on graphics programming, rendering techniques, and engine development. Heavy emphasis on math fundamentals and computer graphics theory combined with practical implementation.

Primary School Teacher Education (PABO)
Fontys University of Applied Sciences
2021-2023

Advanced math
Fontys University of Applied Sciences
2020-2021

KEY PROJECTS

Voxel Based Volumetric Fog

Traverse Research
January 2026

Built a real time volumetric fog system with god rays using froxel based techniques. Created an atmospheric rendering system optimized for modern graphics pipelines with temporal reprojection for smooth results.

DirectX 12 | Volumentric Rendering | Real time

DLSS Integration

Traverse Research
July 2025

Integrated NVIDIA DLSS into the Traverse rendering framework. Got it working with both DirectX 12 and Vulkan backends to boost performance while keeping visual quality high.

DirectX 12 | Vulkan | DLSS | Performance

Ascension Protocol VR Game

University Project
June 2025

Made a complete VR game using our own custom engine. Handled all the graphics programming including the rendering pipeline, VR integration, and optimizing everything to run smoothly in VR.

Custom Engine | Game Development | VR

Raytracing in Godot

University Project
September 2025

Extended Godot Engine with hardware raytracing using Vulkan ray tracing extensions. Set up acceleration structures and shader binding to get real time ray traced rendering working in the engine.

Vulkan | Ray Tracing | Engine Extension

EV Engine

Personal Project
November 2025

Built a custom DirectX 12 rendering engine from scratch. Includes a modern rendering pipeline with descriptor management, resource state tracking, and various optimization techniques.

DirectX 12 | Custom Engine | Rendering Pipeline

Deferred Rendering on PS5

University Project
September 2024

My first big rendering project where I implemented a deferred rendering pipeline on PlayStation 5. Got to explore console specific optimizations and learn about the PS5 graphics features.

PlayStation 5 | Deferred Rendering | Console Dev

KEY PROJECTS

Wasteland Walkers

University Project
June 2024

Created a game in Unreal Engine with AI agents using machine learning techniques. Implemented MCTS (Monte Carlo Tree Search) for intelligent enemy behavior in a desert wasteland setting.

Unreal Engine | Machine Learning | Game AI

Voxel Software Ray tracer

University Project
September 2023

Built a CPU based raytracer from scratch. Implemented all the core raytracing algorithms including reflection, refraction, and various material types running entirely on the CPU.

Ray Tracing | CPU Rendering | Software Renderer