

Viktor Zoutman (vzout.com)

Currently living in Sweden (available to relocate)

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Software engineer with a deep passion for state of the art offline and real time graphics. Interested in art, mathematics and performance. Born in the Netherlands.

APIs: Vulkan, DirectX 12, OpenGL, Metal.

Platforms: Windows, Linux, macOS, Android.

Development: Compute graphics, Continuous integration, Unit testing, Virtual Reality, Agile development, Data oriented design.

Software: Visual Studio, VSCode, Git, Perforce, Jira, Render Doc, NVIDIA Nsight, AMD Dev Tools, Unreal Engine 4, Unity, Blender

Languages: C++, C, Rust, SPIR-V, HLSL, GLSL, Metal, HTML, JavaScript, Web Assembly.

WORK EXPERIENCE



Embark Studios

RENDERING ENGINEER (2020 - Current)

I was responsible for integrating a render graph along with ray traced shadow, reflections and global illumination passes. I did a large amount of optimizations and improvements to the rendering backend to make it production ready.

Furthermore, I implemented features like dynamic resolution scaling, outlines, overlays, distance fog, FSR, order independent transparency, NVIDIA reflex and more. I also worked on creating a rendering API for our gameplay programmers and modding community allowing them to dynamically modify geometry, create particle systems and other sims / effects.

Additionally, I worked on experiments like volumetric fog, clouds, SSR, ray traced transparency and god rays. These features are yet to land in main.

For over a year, I was the only rendering engineer working on the in-house renderer. There is not a single area of the renderer I haven't touched.



Traverse Research

RENDERING ENGINEER INTERN (2020)

For my bachelors I did my internship at Traverse Research where I worked for Embark Studios as a contractor. I joined Embark's creative playground project as a rendering engineer. This project uses an in-house engine built from scratch using Vulkan written in Rust.

During this internship, I added virtual reality support to the engine and did the initial Android port. Also, I replaced their bling-phong shading with a physically based shading model and added image based lighting.

Before I started full time at Embark, I briefly worked on a Rust → SPIR-V compiler, where I wrote a structurizer.



Team6 Game Studios

GAMEPLAY PROGRAMMER (2016)

I did a 6-month-long internship at Team6 where I worked on racing games implementing gameplay features such as missions, a minimap, diegetic UI, weapon systems and more using Unreal Engine 4. I worked on Road Rage, Monster Jam and a canceled title.

EDUCATION



Breda University of Applied Sciences

BACHELOR OF SCIENCE (2016 - 2020)

In my 3rd year, together with a team of 7 people, we created a real time hardware accelerated hybrid ray tracer using DirectX 12. We integrated this renderer into Autodesk Maya as a viewport replacement to help artists iterate faster. I was the lead developer on this project.

In my 4th year, I worked on a project experimenting with mesh shaders. Here I tried to achieve greater geometric density by using instancing, tessellation and advanced culling techniques with mesh shaders. I also implemented a hybrid path tracer with approximate subsurface scattering, clear coat and anisotropic materials.



Alfa College

MBO DEGREE (2018 - 2020)

I completed this 4 year degree in 2 years by taking an accelerated path. During these 2 years I created a bunch of small games. Allowing me to focus on all parts of game development like design, production, art and programming. I mainly focused on programming during this time and created my own OpenGL renderer for some of the projects and started playing with Vulkan.