Gray Olson

COMPUTER GRAPHICS PROGRAMMER

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Profile

Artist, programmer, gamer, bit-twiddler. Interested in everything related to technology and art. I love to combine these two interests by creating digital art, and graphics programming is an amazing way to both create and better understand how digital art is created. It allows me to combine my love for art with my love for computers, programming, and games. I am very inquisitive and a fast learner, especially when hot on the trail of a project I am passionate about.

Skills

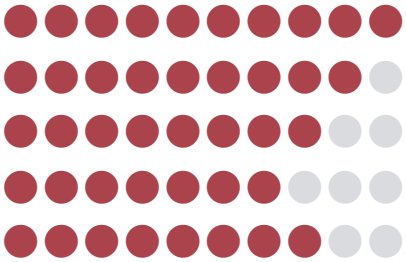
Rust

Vulkan

OpenGL

C++

Ray Tracing



Experience

GSoC Programmer appleseedhq/Google
Jun 2019-Aug 2019
Completed Google Summer of Code 2019 in which I designed and completed a project to improve appleseed.studio's realtime viewport, especially in relation to rendering light paths.

DCSI Teacher Arizona State University AME
Jun-July 2017, 2018, 2019
As a student teacher at DCSI, a technology and arts related summer camp run by ASU, I helped develop and teach curriculum related to creative coding, game development, and VR application development using Processing and Unity.

Freelance Developer
Sep 2014 – Present
Worked on graphics and rendering technology in Open Source projects both in free time and for contract. Completed Google Summer of Code successfully in the summer of 2019.

Freelance Visual Artist
Sep 2015 – Present
Completed illustrations for commission and contract including album covers, portraits of people, and fictional characters. Completed both 2d and 3d digital and traditional art.

Education

Bachelor of Fine Arts - BFA Fine Arts - Drawing
Arizona State University 2017 – 2021

Languages

English Native, college/professional level

Projects

ultraviolet https://github.com/termhn/ultraviolet
August 2019-Present
ultraviolet is a Rust linear and geometric algebra crate, built especially for speed, both in terms of runtime performance and productivity. It was designed from the start to take full advantage of SIMD operations, providing both normal scalar and 'wide' vector versions of each type, where the wide type stores and operates on the data for multiple copies of the base type at once in an 'AoSoA' fashion.

rayn https://github.com/termhn/rayn
Aug 2018 - Present
rayn is a CPU-based path-tracing renderer of my own design, taking inspiration from pbrt and Nvidia's research on wavefront pathtracing. It is built with rendering fractals and SDFs as a primary concern. It was written as a way to learn about the specifics of ray-traced rendering theory and practice, as well as to explore making art through high-quality fractal rendering.

Google Summer of Code - appleseed
https://grayolson.me/blog/posts/gsoc-2019/
Jun - Aug 2019
appleseed is an open-source, production quality renderer. I successfully completed a Google Summer of Code project in which I rewrote and improved the viewport display and light path rendering code in appleseed.studio.

rendy-pbr https://github.com/termhn/rendy-pbr
February 2019 – Present
rendy-pbr is a demo glTF viewer/physically-based renderer built with gfx-hal (Vulkan) and rendy (a render-graph implementation in Rust).

Amethyst Game Engine https://amethyst-engine.org/
Oct 2018 – Dec 2019
Worked on the Amethyst game engine as a part of the Rendering team. including some contract work. I've worked on modernizing and updating the Amethyst graphics pipeline, helping with the conversion from a legacy OpenGL-based pipeline to a modern, render-graph based one built on top of Vulkan, DX12 and Metal.

gfx-rs https://github.com/gfx-rs/gfx
Fall 2017-Present
gfx-rs is a cross-platform, low-level graphics abstraction in Rust which implements a Vulkan-like API and maps that API to Vulkan, DX12, and Metal. I've contributed bug fixes and feature additions as well as helped improve documentation.

Art Portfolio
https://grayolson.artstation.com/
A portfolio of my 2d and 3d artwork, completed for school, for contract, or for personal value.