Allison Thompson

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Website with portfolio: https://allisonrenie.github.io
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Objective

Work with creative and interesting people to expand my skills and create useful and beautiful things.

Education

Honors Bachelor of Science in Computer Science, June 2023
Oregon State University
Summa Cum Laude (3.86 GPA)
Minor in English

Relevant Employment

Undergraduate Learning Assistant at Oregon State University, Sept. 2022 - June 2023
Used communication and organizational skills to guide undergraduate engineering students through group learning projects and programming assignments in the classes ENGR 100, ENGR 102, and ENGR 103.

Projects

- Completed a year long Honors thesis project where I combined a complex numerical simulation (my own implementation in C/C++ of the existing forest model 3-PG) with 3D graphics (OpenGL) and a user interface (GLUI) to create an interactive forest growth simulation.
- Completed a 9 month Capstone design team project where we used the game engine Bevy to create a rigid body dynamics driving simulation in Rust– my focus was on the physics.
- Programmed a basic forest generation program in C++ with OpenGL that allows a user to place randomly generated trees on a plane.
- Programmed a modifiable moss shader in C++ with GLSL that can add moss to an OBJ file.
- Created (including models) a 3 minute long animation using Blender.
- Programmed robots in Java as part of FRC team A05 Annex senior year of high school, went to FRC Worlds in 2019.

Skills

Proficient in:

- C/C++
- OpenGL and GLSL
- Linear algebra (matrices, eigenvalues/vectors, etc)
- Git/GitHub
- Working in a Linux environment
- Writing and communication

Previous experience with:

- Rust
- Vulkan
- Python, Java, HTML, CSS, JavaScript, R, MASM
- OpenMP, SIMD, CUDA, OpenCL
- Bevy, Blender, Krita, GIMP

Relevant Coursework

Linear Algebra, Vulkan, Data Structures, Computer Graphics Shaders, Intro to Parallel Programming, Computer Science Skills for Simulation and Game Programming, Computer Animation, Computer Architecture and Assembly Language, Web Development, Operating Systems, Introduction to Computer Graphics, Vector Calculus