Nathan Hutton

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University of Utah

M.S. Computer Graphics & Data Visualization

Westminster University

B.S. Cohputer Science, Minor in Applied Mathematics

• Awarded outstanding computer science student of the year

Salt Lake Community College

A.S. General Education

• Earned degree while in high school

EXPERIENCE

Software Engineer Intern

May 2025 – Aug. 2025

Flight Safety International

Broken Arrow, OK

- Helped integrate Phidgets API with RACKtangle hardware for real-time flight simulation I/O in C++
- Worked exlusively in Windows and Visual Studio

Software Engineer Intern

Feb. 2023 – May 2024

Idaho National Laboratory

 $SLC,\ UT$

- Debug and reformat C++, C, and Python code
- Convert Matlab test harness to Python
- Configure CI/CD pipelines
- Implement, refactor, and debug GUIs
- Worked exclusively on Linux

Computer Science Tutor/TA

Aug. 2022 – Dec. 2023

Westminster University

 $SLC, \ UT$

IT Technician

Aug. 2021 – May 2024

 $We stminster\ University$

 $SLC, \ UT$

Projects

Boids Flocking Simulation $\mid C++, OpenGL, ImGui$

GitHub | Video

- A simple ruleset by Craig Reynolds leads to complex flocking behavior
- Extensive customization and debugging implemented with ImGui

Solar System $\mid C++, OpenGL$

GitHub | Video

• Dynamic physics, shadow maps, bloom, and verlet numerical integration

Volme Renderer | C++, OpenGL, Glui

GitHub | Video

• Ray marching in GLSL with modifiable transfer functions

AQI Visualization | Javascript, D3, JSON

 $\underline{\mathrm{GitHub}} \mid \underline{\mathrm{Video}}$

- Interactive visualization for Utah's air quality index
- I made 63% of all commits

Squibblets | C#, Unity, Firebase, AGILE

 $\underline{\text{GitHub}}$

• 4-person team project. I made the gameplay loop, online leaderboard, UI, and 54% of all commits

Mass Spring System | C++, OpenGL, Eigen

 GitHub

• Simulate a mass spring system made up of 8,000 tetrahedrons in real time

Ray Tracer | Python

GitHub

• No reliance on libraries, everything made from scratch

TECHNICAL SKILLS

Languages: C/C++, Python, Java, C#, JavaScript, HTML/CSS, Latex

Developer Tools: Linux, Git, Docker, Vim, VS Code, Visual Studio, PyCharm, IntelliJ

Libraries: OpenGL, NumPy, pandas, ImGui, Matplotlib, Eigen