

Nathan Hutton

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EDUCATION

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| University of Utah <i>M.S. Computer Graphics & Data Visualization</i> | Dec. 2025 GPA: 4.0 |
| Westminster University <i>B.S. Computer Science, Minor in Applied Mathematics</i> <ul style="list-style-type: none">Awarded outstanding computer science student of the year | May 2024 GPA: 4.0 |
| Salt Lake Community College <i>A.S. General Education</i> <ul style="list-style-type: none">Earned degree while in high school | May 2021 GPA: 4.0 |

EXPERIENCE

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| Software Engineer Intern <i>Flight Safety International</i> <ul style="list-style-type: none">Migrated flight simulation's I/O system to Phidgets API in C++, eliminating \$50,000+ in legacy hardware costs | May 2025 – Aug. 2025 <i>Broken Arrow, OK</i> |
| Software Engineer Intern <i>Idaho National Laboratory</i> <ul style="list-style-type: none">Migrated test harness from MATLAB to Python with Numpy, Scipy, and Pytest, saving thousands in licensing feesConfigured CI/CD GitLab pipelines within a Linux environment to automate build and test processesRefactored a legacy RF transceiver GUI using Tkinter, improving user workflow and repository maintainability | Feb. 2023 – May 2024 <i>SLC, UT</i> |
| Computer Science Tutor/TA <i>Westminster University</i> | Aug. 2022 – Dec. 2023 <i>SLC, UT</i> |
| IT Technician <i>Westminster University</i> <ul style="list-style-type: none">Resolved 500+ Jira tickets for network and account issuesTrained 6 IT employees on Jira ticketing, Windows, and customer service practices | Aug. 2021 – May 2024 <i>SLC, UT</i> |

PROJECTS

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| Boids Flocking Simulation C++, OpenGL, ImGui <ul style="list-style-type: none">Implemented Craig Reynolds' flocking algorithm to simulate the emergent behavior of 4,000+ agents in real-time | GitHub Video |
| Solar System C++, OpenGL, JSON <ul style="list-style-type: none">Dynamic physics, shadow maps, bloom, and verlet numerical integration | GitHub Video |
| Volme Renderer C++, OpenGL, Glui <ul style="list-style-type: none">Ray marching in GLSL with modifiable transfer functions | GitHub Video |
| Air Quality Index Visualization Javascript, D3, JSON <ul style="list-style-type: none">Interactive D3.js visualization for Utah's AQI, personally contributing 63% of the project's total commits | GitHub Video |
| Ray Tracer C++ <ul style="list-style-type: none">Reflections, refractions, shadows, bounding volume heirachies, texture mapping, and anti-aliasing | GitHub |
| Squibblets C#, Unity, Firebase, AGILE <ul style="list-style-type: none">Engineered the primary gameplay loop and UI while integrating Firebase for the online leaderboard system, personally accounting for 54% of all commits on a 4-person team | GitHub |
| Mass Spring System C++, OpenGL, Eigen <ul style="list-style-type: none">Simulate a mass spring system made up of 8,000 tetrahedrons in real time | GitHub |
| Screen-Space Fluid Renderer C++, OpenGL <ul style="list-style-type: none">Real-time rendering of cached fluid simulations with caustics. Uses narrow-range filter to achieve surface shape. | GitHub Video |

TECHNICAL SKILLS

Languages: C/C++, Python, Java, C#, JavaScript, HTML/CSS, LaTeX, SQL
Tools: Linux, Git, Docker, Vim, VS Code, Visual Studio, Windows, Jira
Libraries: OpenGL, NumPy, Pandas, ImGui, Matplotlib, Eigen, Pytorch, SciPy