

Nathan Hutton

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EDUCATION

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

EXPERIENCE

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

Real-Time Swarm AI Simulation C++, OpenGL, ImGui <ul style="list-style-type: none">Implemented an agent-based AI system from scratch to simulate the emergent behavior of 4,000+ agents	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