

# Nathan Hutton

YouTube : [www.youtube.com/@nathanhutton3895](https://www.youtube.com/@nathanhutton3895)

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GitHub : [github.com/Nathan-Hutton](https://github.com/Nathan-Hutton)

## EDUCATION

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### University of Utah

*Master of Computer Graphics and Data Visualization — GPA: 4.0*

SLC, UT

*Dec. 2025*

### Westminster University

*Bachelor of Computer Science — GPA: 4.0*

SLC, UT

*May. 2024*

- Applied mathematics minor.

- Received the outstanding computer science student of the year award.

### Salt Lake Community College

*Associate of Science — GPA: 4.0*

SLC, UT

*May. 2021*

- Earned degree while in high school.

## EXPERIENCE

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### Flight Safety International

*Software Engineer Intern*

Broken Arrow, OK

*May. 2025 - Aug. 2025*

### Idaho National Laboratory

*Software Engineer Intern*

SLC, UT

*Feb. 2023 - May. 2024*

- Debug and reformat C++, C, and Python code.
- Work with waveform code on Linux.
- Convert Matlab test harness to Python.
- Configure CI/CD pipelines.
- Implement GUIs which interface with a backend.
- Converted documents made in LibreOffice to Latex documents.

### Westminster University

*Computer Science Tutor/TA*

SLC, UT

*Aug. 2022 - Dec. 2023*

- Guide computer science students through computer science and algorithms classes.

### Westminster University

*IT Technician*

SLC, UT

*Aug. 2021 - May. 2024*

- Help Westminster students and faculty with technical issues over the phone and in person.

## PROJECTS

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- **Boids Flocking Simulation** [[Demo Video](#)]: OpenGL flocking simulation in C++. A simple ruleset by Craig Reynolds leads to complex flocking behavior. Uses ImGui, color blending in the HSB colorspace, and obstacle avoidance.
- **Solar System** [[Demo Video](#)]: Solar system simulation with dynamic physics in OpenGL/C++. Utilizes shadow mapping, HDR, environment mapping, verlet numerical integration, bloom, and more.
- **AQI Visualization** [[Demo Video](#)]: Interactive visualization for Utah's air quality index using Javascript and D3. I made 68% of all commits in this group project.
- **Volume Renderer** [[Demo Video](#)]: OpenGL/C++ volume renderer with modifiable transfer functions.
- **Squibbles**: 4-person team Unity project using AGILE. I made 54% of all commits and created the main gameplay loop, movement, online leaderboards, audio, AI, UI, menus, and more.
- **Ray Tracer**: Python Ray Tracer made with no reliance on third-party libraries.
- **Minijava Compiler**: Includes type-checking, lexing and parsing with ANTLR4, JVM assembly code generation, AST generation, flow control, package inclusion, and method calls.
- **Java Chatroom**: Terminal based chatroom utilizing java.net. Features include broadcast messages, private messages, user list retrieval, and notifications when users join or leave.

## PROGRAMMING SKILLS

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**Languages:** C++, Python, C, Java, C#, Javascript

**Tech:** OpenGL, Linux, Docker, Gitlab CI/CD, D3