Vaughn Zaayer

Portland, OR | vaughnzaayer@gmail.com | +1-925-330-1150 | linkedin.com/in/vaughnzaayer | github.com/vaughnzaayer

Introduction

Inquisitive Reed College mathematics senior with broad experience in both theoretical and applied math and computer science. Leverages strong analytical reasoning to develop effective practical software solutions for real-world use. Keen interest in computational geometry, rendering, and graphics technologies.

Education

Reed College, Bachelor of Arts in Mathematics — Aug. 2021 – May 2026

Relevant Coursework: Real Analysis, Algorithms and Data Structures, Abstract Algebra, Computer Systems, Software Engineering, Cryptography, Linear Algebra, Vector Calculus, Private and Fair Data Analysis.

Relevant Experience

Reed College Senior Thesis — Sep. 2025 – Current
Algorithms for Mesh Simplification Using Discrete Differential Geometry — Portland, OR

- Conducting year-long independent research in computational geometry, implementing mesh simplification algorithms, formalizing complex properties in exterior algebra and calculus, and translating mathematical concepts into practical computational methods.
- Presenting ongoing findings to faculty during Thesis Defense and preparing a 70-page publication detailing proofs, algorithmic frameworks, and applications in computer graphics.

Computer Science & Technology Association at Reed (CSTAR) — Aug. 2021 – Jan. 2025
Vice President — Portland, OR

- Led a team in planning and executing workshops, networking events, and professional development initiatives to promote skill-sharing and community engagement in the Computer Science Department.
- Strengthened student-faculty relationships and mentorship opportunities, enhancing collaboration and departmental outreach.

Lindamood-Bell Learning Processes — May 2024 – Aug. 2024
Education Clinician — Walnut Creek, CA

- Delivered individualized instruction and developed tailored learning strategies, improving reading and writing outcomes for students with diverse needs.
- Authored detailed progress reports contributing to Stanford research on alternative learning methods and neurological development, supporting academic growth and confidence.

Agile Displays — May 2023 – Aug. 2023
Quality Assurance Consultant — San Jose, CA

- Developed and executed comprehensive testing plans, producing reproducible bug reports and ensuring software and hardware reliability.
- Collaborated with development teams to track and resolve complex bugs, optimizing products before release.

Introduction to Computer Science (CSCI121), Professor Jim Fix — Aug. 2022 – Dec. 2022
Teacher's Assistant — Portland, OR

- Supported students in mastering programming fundamentals, algorithms, and data structures through individualized guidance and group instruction, providing constructive feedback on assignments and exams.
- Collaborated with the professor on lesson planning, syllabus design, and project development to improve course structure and student engagement.

Projects

RemoteText – REST, Rust — 2022 | ↗

- An open-source, browser-accessible text editing platform with robust Git-based version control and collaboration tools

CleanupCrew – Python, PyGame — 2021 | ↗

- A "Metroidvania"-style 2D game with procedural map generation, a custom animation framework, and a modular scene management system

Skills

Languages: C/C++, Python, Rust, Swift, MIPS Assembly, R, MATLAB, Java, Java Script

Tools: Postman, Vim/NeoVim, JetBrains Suite, Git/GitHub, Linux, LATEX, gdb/lldb, Google Suite, Microsoft-Suite, R Studio