Mason **Bott**

Computer Science Student

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Summary

Prospective Computer Science student with interests in problem solving, learning, and creating. Loves the ever-changing nature of the field, always providing new technologies, tools, or concepts to discover.

Education

University of Colorado Boulder

Boulder, Colorado

B.A. in Computer Science

August 2022 - May 2026 (expected)

- Pursuing a minor in mathematicse
- Dean's list for 3 semesters

Current GPA: 3.953 / 4.000
Relevant coursework: Computer systems, algorithms, data structures, database systems, data science, software development methods and tools, calculus 1 & 2, discrete math, linear algebra
Clubs: Competitive programming, server development
Other: 2nd place at HackCU 2024 (hackathon)

Projects

Rush

github.com/masoniis/rush

A rudimentary shell application made in rust

Rust, unix, system calls

- A rudimentary shell (process management CLI) made in rust with basic functionality to run processes and view their respective state. Uses the Unix philosophy, including the use `fork` and `exevpe` system calls.
- Managed complex logic regarding multiple processes resulting from the `fork()` system call. This includes reaping dead child processes, intercepting signals from the kernel (to terminate a process, for example), and tracking process groups.

Quantum Chart

quantumchart.vercel.app

A functional website for FBLA

HTML, CSS, JS

- Developed a functional website that placed 2nd at the state level for the FBLA website design competition.
- Worked rigorously to make a practical design with satisfying animations.

Sedmos

sedmos.vercel.app

An online graphing calculator

HTML, CSS, TS, Svelte, Tailwind, MathQuil

- With a partner, created a graphing calculator inspired by Desmos.com with some unique features like direct vector field support.
- Implemented algorithms for drawing the graph. Involved conversions from the HTML canvas coordinate system to Cartesian, as well custom drag handlers to update graph state.
- Created clean UI to connect the dynamic user input to the back end using customized MathQuil boxes which output LaTeX. Supports reordering of the UI and complex math expressions.

Skills

Languages C++, Rust, Python, JS/TS, nix (language)
Tools GDB, docker, nix (package manager), git, linux, direnv, regex, vim/neovim

Personal interests

Piano, music, computers/tech, math, puzzles, games, philosophy