

Education

B.S. Computer Science ▪ University of Utah

expected 2027

Skills

Proficient

Dart, JS, CSS, SVG, HTML, Java, Python, TS, Typst, GitHub Actions, Zig

Familiar

Angular, Bash, C, C#, Cordova, C++, CISC, CircleCi, Flutter, Metal, MongoDB, MIPS
asm, OpenCL, PHP, Ruby, Rust, Swift, WASM (WAT)

Experience

Research Assistant ▪ University of Utah2025–

Benchmarking gradual typing in Meta’s Cinder variant of python

Teaching Assistant ▪ University of Utah2025–

Leading labs, grading, assisting students for COMP 1020

Software Engineer/Dev ops ▪ Stutor Inc.2023–2024

Architected automation pipeline

Optimized DB indexes, reducing query times by up to 8x

Web Developer/Dev Ops ▪ Jerran Software Solutions2022–2023

Overhauled LDS MTC QA/CICD workflow, substantially reducing regression burden

Rewrote Embark app startup to reduce first time loading by up to 50%

Research Assistant Intern ▪ Earl Keefe PhD2020–2021

Visualizations for anthropology research

Web Dev. Intern ▪ Frelia2019

Web scraping SNPedia for AI training

Projects

Beta reduction visualizer ▪ js html ↗2026

Trace argument through function application with useful highlighting

Optimized bead/gravity sort ▪ zig ↗2026

Bead sort via popcount intrinsics and bit matrix transpositions for 32 u5s

Tiny nkey rollover tester OS ▪ zig ↗2025

Ported as OS class assignment to zig, demo of keyboard in and vga out

Fast approximate change of base ▪ python ↗2025

Novel algorithm for printing numbers larger than 10^{10⁵} efficiently

Automated resume ▪ typst ↗2025

Automated typst resume deployed to website

Held-karp ▪ zig ↗2025

Well optimized Held-karp TSP algorithm using bitsets and Gosper’s hack

Spreadsheet formulas to DLL compiler ▪ c ↗2025

Compiles formulas in a spreadsheet into a DLL

Color alchemy ▪ qt c++ ↗2024

Beautiful game for learning color mixing, properly using oklab color space

CSS grid examples ▪ css html ↗2024

Reference for common design patterns that should be implemented with css grid

Randomized Pacman game ▪ java ↗2021

Pacman game using some algorithms from my 2420 class: A*, DFS, BFS, Union find

Svg Animator ▪ html js css ↗2019

Svg animator inspired by ms paint

Misc

Contributed code field to instruction decoding ▪ MARS IDE ↗2025

#12 Ranked team at Rocky Mountain Regional Contest ▪ ICPC ↗2025

Jane Street Leaderboard

Number Cross 5 ↗

Sum One, Somewhere ↗