

Education

B.S. Computer Science University of Utah	2022 - 2027 <i>expected</i>
A.S. Computer Science (incomplete) SLCC	2019 - 2022 <i>transferred</i>

Technology

Comfortable Languages <ul style="list-style-type: none">Python, C, Zig, Dart, JS, TS, WASM (WAT), Java, C#
Familiar Languages <ul style="list-style-type: none">Ruby, C++, Rust, Swift, Metal, OpenCL, Typst, F#, x86 assembly, MIPS assembly, PHP, Bash
Misc <ul style="list-style-type: none">Flutter, Angular, Laravel, cicd/github actions/circleCi, css, html/svg, mongoDB, Cordova

Experience

Research Assistant University of Utah <ul style="list-style-type: none">Benchmarking gradual typing in Meta’s Cinder variant of python	Nov 2025 - present
Teaching Assistant University of Utah <ul style="list-style-type: none">Leading labs, grading, assisting students for COMP 1020	Apr 2025 - present
Software Engineer/Dev ops Stutor Inc. <ul style="list-style-type: none">Architected CICD pipelineOptimized DB indexes, reducing query times by up to 8x	Sep 2023 - Apr 2024
Web Developer/Dev Ops Jerran Software Solutions <ul style="list-style-type: none">Overhauled LDS MTC QA/CICD workflow, substantially reducing regression burdenRewrote Embark app startup to reduce first time loading by up to 50% for users with poor internet	Apr 2022 - Sep 2023
Research Assistant Intern Earl Keefe PhD <ul style="list-style-type: none">Visualizations for anthropology research	Nov 2020 - Jun 2021
Web Dev. Intern Frelii <ul style="list-style-type: none">Web scraping SNPedia for AI training	May 2019 - Sep 2019

Projects

Optimized bead/gravity sort zig <ul style="list-style-type: none">Bead sort done via popcount intrinsics and bit matrix transpositions. Only for 32 u5s	2026
Tiny nkey rollover tester OS zig <ul style="list-style-type: none">Ported as OS class assignment to zig and then added keyboard input and vga output	2025
Fast approximate change of base python <ul style="list-style-type: none">Novel algorithm for printing numbers larger than 10^{10^5} efficiently	2025
Automated resume typst <ul style="list-style-type: none">CICD typst resume	2025
Held-karp zig <ul style="list-style-type: none">Well optimized bitset based Held-karp TSP algorithm	2025
Spreadsheet formulas to DLL compiler c <ul style="list-style-type: none">A spreadsheet which compiles formulas to a DLL which can be used in DOTNET projects	2025
Color alchemy qt c++ <ul style="list-style-type: none">A game for learning color mixing	2024
CSS grid examples css html <ul style="list-style-type: none">Examples of common design patterns implemented with css grid as a good reference	2024
Randomized Pacman game java <ul style="list-style-type: none">Pacman game using some algorithms from my 2420 class: A*, DFS, BFS, Union find	2021

Misc

Added code field to instruction decoder MARS IDE	2025
#12 Ranked team at Rocky Mountain Regional Contest ICPC	2025
Jane Street Leaderboard <ul style="list-style-type: none">Number Cross 5Sum One, Somewhere	May 2025 Apr 2025