

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++, CICD, CircleCi, Flutter, Metal, MongoDB, MIPS	
	asm, OpenCL, PHP, Ruby, Rust, Swift, WASM (WAT)	
Experience	Research Assistant ▪ University of Utah	2025–
	Benchmarking gradual typing in Meta’s Cinder variant of python	
	Teaching Assistant ▪ University of Utah	2025–
	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 Solutions	2022–2023
	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 PhD	2020–2021
	Visualizations for anthropology research	
	Web Dev. Intern ▪ Frelii	2019
	Web scraping SNPedia for AI training	
Projects	Beta reduction visualizer ▪ js html ↗	2026
	Visualizer for lambda calculus beta reduction which traces arguments as they are distributed	
	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 <sup>10<sup>5</sup></sup> 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 ↗