

# Robert Morelli

[github.com/robertmorelli](https://github.com/robertmorelli) ↗

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Education	B.S. Computer Science ▪ University of Utah	expected 2027
Skills	<b>Proficient</b> Dart, JS, CSS, SVG, HTML, Java, Python, TS, Typst, GitHub Actions, Zig	
	<b>Familiar</b> Angular, Bash, C, C#, Cordova, C++, CI/CD, CircleCi, Flutter, Metal, MongoDB, MIPS asm, OpenCL, PHP, Ruby, Rust, Swift, WASM (WAT)	
Experience	<b>Research Assistant ▪ University of Utah</b> Benchmarking gradual typing in Meta's Cinder variant of python	2025–
	<b>Teaching Assistant ▪ University of Utah</b> Leading labs, grading, assisting students for COMP 1020	2025–
	<b>Software Engineer/Dev ops ▪ Stutor Inc.</b> Architected automation pipeline  Optimized DB indexes, reducing query times by up to 8x	2023–2024
	<b>Web Developer/Dev Ops ▪ Jerran Software Solutions</b> Overhauled LDS MTC QA/CI/CD workflow, substantially reducing regression burden  Rewrote Embark app startup to reduce first time loading by up to 50%	2022–2023
	<b>Research Assistant Intern ▪ Earl Keefe PhD</b> Visualizations for anthropology research	2020–2021
	<b>Web Dev. Intern ▪ Frelia</b> Web scraping SNPedia for AI training	2019
Projects	<b>Optimized bead/gravity sort ▪ zig</b> ↗  Bead sort via popcount intrinsics and bit matrix transpositions for 32 u5s	2026
	<b>Tiny nkey rollover tester OS ▪ zig</b> ↗  Ported as OS class assignment to zig, demo of keyboard in and vga out	2025
	<b>Fast approximate change of base ▪ python</b> ↗  Novel algorithm for printing numbers larger than $10^{10^5}$ efficiently	2025
	<b>Automated resume ▪ typst</b> ↗  Automated typst resume deployed to website	2025
	<b>Held-karp ▪ zig</b> ↗  Well optimized Held-karp TSP algorithm using bitsets and Gosper's hack	2025
	<b>Spreadsheet formulas to DLL compiler ▪ c</b> ↗  Compiles formulas in a spreadsheet into a DLL	2025
	<b>Color alchemy ▪ qt c++</b> ↗  Beautiful game for learning color mixing, properly using oklab color space	2024
	<b>CSS grid examples ▪ css html</b> ↗  Reference for common design patterns that should be implemented with css grid	2024
	<b>Randomized Pacman game ▪ java</b> ↗  Pacman game using some algorithms from my 2420 class: A*, DFS, BFS, Union find	2021
Misc	<b>Contributed code field to instruction decoding ▪ MARS IDE</b> ↗	2025
	<b>#12 Ranked team at Rocky Mountain Regional Contest ▪ ICPC</b> ↗	2025
	<b>Jane Street Leaderboard</b> Number Cross 5 ↗  Sum One, Somewhere ↗	