

Robert Morelli

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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 Benchmarking gradual typing in Meta's Cinder variant of python Teaching Assistant ▪ University of Utah Leading labs, grading, assisting students for COMP 1020 Software Engineer/Dev ops ▪ Stutor Inc. Architected automation pipeline Optimized DB indexes, reducing query times by up to 8x Web Developer/Dev Ops ▪ Jerran Software Solutions 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 Visualizations for anthropology research Web Dev. Intern ▪ Frelia Web scraping SNPedia for AI training	2025- 2025- 2023-2024 2022-2023 2020-2021 2019
Projects	Optimized bead/gravity sort ▪ zig ↗ Bead sort via popcount intrinsics and bit matrix transpositions for 32 u5s Tiny nkey rollover tester OS ▪ zig ↗ Ported as OS class assignment to zig, demo of keyboard in and vga out Fast approximate change of base ▪ python ↗ Novel algorithm for printing numbers larger than 10^{10^9} efficiently Automated resume ▪ typst ↗ Automated typst resume deployed to website Held-karp ▪ zig ↗ Well optimized Held-karp TSP algorithm using bitsets and Gosper's hack Spreadsheet formulas to DLL compiler ▪ c ↗ Compiles formulas in a spreadsheet into a DLL Color alchemy ▪ qt c++ ↗ Beautiful game for learning color mixing, properly using oklab color space CSS grid examples ▪ css html ↗ Reference for common design patterns that should be implemented with css grid Randomized Pacman game ▪ java ↗ Pacman game using some algorithms from my 2420 class: A*, DFS, BFS, Union find	2026 2025 2025 2025 2025 2025 2025 2024 2024 2021
Misc	Contributed code field to instruction decoding ▪ MARS IDE ↗ #12 Ranked team at Rocky Mountain Regional Contest ▪ ICPC ↗ Jane Street Leaderboard Number Cross 5 ↗ Sum One, Somewhere ↗	2025 2025