

# Robert Morelli

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

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