

# Robert Morelli

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

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<b>Education</b>	<b>B.S. Computer Science (in progress)</b> • University of Utah <b>A.S. Computer Science (incomplete)</b> • SLCC	2022 – 2027 expected 2019 – 2022 transferred
<b>Technology</b>	<b>Expert</b> Zig, Dart, JS, WASM (WAT), CSS, SVG, GitHub Actions, MIPS asm <b>Proficient</b> Angular, C, C#, Cordova, Flutter, HTML, Java, Python, TS, Typst <b>Familiar</b> Bash, C++, CICD, CircleCi, Metal, MongoDB, OpenCL, PHP, Ruby, Rust, Swift	
<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 CICD 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 Dev. Intern</b> • Frellii Web scraping SNPedia for AI training	Nov 2025 – present Sep 2025 – present Sep 2023 – Apr 2024 Apr 2022 – Sep 2023 Nov 2020 – Jun 2021 May 2019 – Sep 2019
<b>Projects</b>	<b>Optimized bead/gravity sort</b> • zig ⚡ Bead sort done via popcount intrinsics and bit matrix transpositions. Only for 32 u5s <b>Tiny nkey rollover tester OS</b> • zig ⚡ Ported as OS class assignment to zig and then added keyboard input and vga output <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 bitset based Held-karp TSP algorithm <b>Spreadsheet formulas to DLL compiler</b> • c ⚡ A spreadsheet which compiles formulas to a DLL which can be used in DOTNET projects <b>Color alchemy</b> • qt c++ ⚡ A game for learning color mixing <b>CSS grid examples</b> • css html ⚡ Examples of common design patterns implemented with css grid as a good reference <b>Randomized Pacman game</b> • 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
<b>Misc</b>	<b>Added code field to instruction decoder</b> • MARS IDE ⚡ <b>#12 Ranked team at Rocky Mountain Regional Contest</b> • ICPC ⚡ <b>Jane Street Leaderboard</b>	2025 2025

**Number Cross 5**

**Sum One, Somewhere**

*May 2025*

*April 2025*