

# Robert Morelli

Github

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<b>Education</b>	<b>B.S. Computer Science</b> University of Utah <b>A.S. Computer Science (incomplete)</b> SLCC	2022 - 2027 expected 2019 - 2022 transferred
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<b>Technology</b>	<b>Comfortable Languages</b> <ul style="list-style-type: none"><li>Python, C, Zig, Dart, JS, TS, WASM (WAT), Java, C#</li></ul> <b>Familiar Languages</b> <ul style="list-style-type: none"><li>Ruby, C++, Rust, Swift, Metal, OpenCL, Typst, F#, x86 assembly, MIPS assembly, PHP, Bash</li></ul> <b>Misc</b> <ul style="list-style-type: none"><li>Flutter, Angular, Laravel, cicd/github actions/circleCi, css, html/svg, mongoDB, Cordova</li></ul>	
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<b>Experience</b>	<b>Research Assistant</b> University of Utah <ul style="list-style-type: none"><li>Benchmarking gradual typing in Meta's Cinder variant of python</li></ul> <b>Teaching Assistant</b> University of Utah <ul style="list-style-type: none"><li>Leading labs, grading, assisting students for COMP 1020</li></ul> <b>Software Engineer/Dev ops</b> Stutor Inc. <ul style="list-style-type: none"><li>Architected CICD pipeline</li><li>Optimized DB indexes, reducing query times by up to 8x</li></ul> <b>Web Developer/Dev Ops</b> Jerran Software Solutions <ul style="list-style-type: none"><li>Overhauled LDS MTC QA/CICD workflow, substantially reducing regression burden</li><li>Rewrote Embark app startup to reduce first time loading by up to 50% for users with poor internet</li></ul> <b>Research Assistant Intern</b> Earl Keefe PhD <ul style="list-style-type: none"><li>Visualizations for anthropology research</li></ul> <b>Web Dev. Intern</b> Frelii <ul style="list-style-type: none"><li>Web scraping SNPedia for AI training</li></ul>	Nov 2025 - present Apr 2025 - present Sep 2023 - Apr 2024 Apr 2022 - Sep 2023 Nov 2020 - Jun 2021 May 2019 - Sep 2019
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<b>Projects</b>	<b>Optimized bead/gravity sort zig</b> <ul style="list-style-type: none"><li>Bead sort done via popcount intrinsics and bit matrix transpositions. Only for 32 u5s</li></ul> <b>Tiny nkey rollover tester OS zig</b> <ul style="list-style-type: none"><li>Ported as OS class assignment to zig and then added keyboard input and vga output</li></ul> <b>Fast approximate change of base python</b> <ul style="list-style-type: none"><li>Novel algorithm for printing numbers larger than <math>10^{10^5}</math> efficiently</li></ul> <b>Automated resume typst</b> <ul style="list-style-type: none"><li>CICD typst resume</li></ul> <b>Held-karp zig</b> <ul style="list-style-type: none"><li>Well optimized bitset based Held-karp TSP algorithm</li></ul> <b>Spreadsheet formulas to DLL compiler c</b> <ul style="list-style-type: none"><li>A spreadsheet which compiles formulas to a DLL which can be used in DOTNET projects</li></ul> <b>Color alchemy qt c++</b> <ul style="list-style-type: none"><li>A game for learning color mixing</li></ul> <b>CSS grid examples css html</b> <ul style="list-style-type: none"><li>Examples of common design patterns implemented with css grid as a good reference</li></ul> <b>Randomized Pacman game java</b> <ul style="list-style-type: none"><li>Pacman game using some algorithms from my 2420 class: A*, DFS, BFS, Union find</li></ul>	2026 2025 2025 2025 2025 2025 2025 2024 2024 2021
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<b>Misc</b>	<b>Added code field to instruction decoder MARS IDE</b> <b>#12 Ranked team at Rocky Mountain Regional Contest ICPC</b> <b>Jane Street Leaderboard</b> <ul style="list-style-type: none"><li><b>Number Cross 5</b></li><li><b>Sum One, Somewhere</b></li></ul>	2025 2025 May 2025 Apr 2025