

Robert Morelli

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Education

B.S. Computer Science University of Utah
A.S. Computer Science (incomplete) SLCC

2022 - 2027 expected
2019 - 2022 transferred

Technology

Comfortable Languages

- Python, C, Zig, Dart, JS, TS, WASM (WAT), Java, C#

Familiar Languages

- Ruby, C++, Rust, Swift, Metal, OpenCL, Typst, F#, x86 assembly, MIPS assembly, PHP, Bash

Misc

- Flutter, Angular, Laravel, cicd/github actions/circleCi, css, html/svg, mongoDB, Cordova

Experience

Research Assistant	University of Utah	Nov 2025 - present
<ul style="list-style-type: none">• Benchmarking gradual typing in Meta's Cinder variant of python		
Teaching Assistant	University of Utah	Apr 2025 - present
<ul style="list-style-type: none">• Leading labs, grading, assisting students for COMP 1020		
Software Engineer/Dev ops	Stutor Inc.	Sep 2023 - Apr 2024
<ul style="list-style-type: none">• Architected CICD pipeline• Optimized DB indexes, reducing query times by up to 8x		
Web Developer/Dev Ops	Jerran Software Solutions	Apr 2022 - Sep 2023
<ul style="list-style-type: none">• Overhauled LDS MTC QA/CICD workflow, substantially reducing regression burden• Rewrote Embark app startup to reduce first time loading by up to 50% for users with poor internet		
Research Assistant Intern	Earl Keefe PhD	Nov 2020 - Jun 2021
<ul style="list-style-type: none">• Visualizations for anthropology research		
Web Dev. Intern	Frelii	May 2019 - Sep 2019
<ul style="list-style-type: none">• Web scraping SNPedia for AI training		

Projects

Optimized bead/gravity sort zig	2026
<ul style="list-style-type: none">• Bead sort done via popcount intrinsics and bit matrix transpositions. Only for 32 u5s	
Tiny nkey rollover tester OS zig	2025
<ul style="list-style-type: none">• Ported as OS class assignment to zig and then added keyboard input and vga output	
Fast approximate change of base python	2025
<ul style="list-style-type: none">• Novel algorithm for printing numbers larger than 10^{10^5} efficiently	
Automated resume typst	2025
<ul style="list-style-type: none">• CICD typst resume	
Held-karp zig	2025
<ul style="list-style-type: none">• Well optimized bitset based Held-karp TSP algorithm	
Spreadsheet formulas to DLL compiler c	2025
<ul style="list-style-type: none">• A spreadsheet which compiles formulas to a DLL which can be used in DOTNET projects	
Color alchemy qt c++	2024
<ul style="list-style-type: none">• A game for learning color mixing	
CSS grid examples css html	2024
<ul style="list-style-type: none">• Examples of common design patterns implemented with css grid as a good reference	
Randomized Pacman game java	2021
<ul style="list-style-type: none">• Pacman game using some algorithms from my 2420 class: A*, DFS, BFS, Union find	

Misc

Added code field to instruction decoder	MARS IDE	2025
#12 Ranked team at Rocky Mountain Regional Contest		
Jane Street Leaderboard		2025
<ul style="list-style-type: none">• Number Cross 5		
<ul style="list-style-type: none">• Sum One, Somewhere		