

Robert Morelli

github.com/robertmorelli

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| Education | B.S. Computer Science (in progress) ▪ University of Utah | 2022 – 2027 expected |
| | A.S. Computer Science (incomplete) ▪ SLCC | 2019 – 2022 transferred |

Technology Expert

Zig, Dart, JS, WASM (WAT), CSS, SVG, GitHub Actions, MIPS asm

Proficient

Angular, C, C#, Cordova, Flutter, HTML, Java, Python, TS, Typst

Familiar

Bash, C++, CICD, CircleCi, Metal, MongoDB, OpenCL, PHP, Ruby, Rust, Swift

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| Experience | Research Assistant ▪ University of Utah | Nov 2025 – present |
| | Benchmarking gradual typing in Meta's Cinder variant of python | |
| | Teaching Assistant ▪ University of Utah | Sep 2025 – present |
| | Leading labs, grading, assisting students for COMP 1020 | |
| | Software Engineer/Dev ops ▪ Stutor Inc. | Sep 2023 – Apr 2024 |
| | Architected CICD pipeline | |
| | Optimized DB indexes, reducing query times by up to 8x | |
| | Web Developer/Dev Ops ▪ Jerran Software Solutions | Apr 2022 – Sep 2023 |
| | 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 | Nov 2020 – Jun 2021 |
| | Visualizations for anthropology research | |
| | Web Dev. Intern ▪ Frelil | May 2019 – Sep 2019 |
| | Web scraping SNPedia for AI training | |

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| Projects | Optimized bead/gravity sort ▪ zig | 2026 |
| | Bead sort done via popcount intrinsics and bit matrix transpositions. Only for 32 u5s | |
| | Tiny nkey rollover tester OS ▪ zig | 2025 |
| | Ported as OS class assignment to zig and then added keyboard input and vga output | |
| | Fast approximate change of base ▪ python | 2025 |
| | Novel algorithm for printing numbers larger than 10^{10^5} efficiently | |
| | Automated resume ▪ typst | 2025 |
| | Automated typst resume deployed to website | |
| | Held-karp ▪ zig | 2025 |
| | Well optimized bitset based Held-karp TSP algorithm | |
| | Spreadsheet formulas to DLL compiler ▪ c | 2025 |
| | A spreadsheet which compiles formulas to a DLL which can be used in DOTNET projects | |
| | Color alchemy ▪ qt c++ | 2024 |
| | A game for learning color mixing | |
| | CSS grid examples ▪ css html | 2024 |
| | Examples of common design patterns implemented with css grid as a good reference | |
| | Randomized Pacman game ▪ java | 2021 |
| | Pacman game using some algorithms from my 2420 class: A*, DFS, BFS, Union find | |

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| Misc | Added code field to instruction decoder ▪ MARS IDE | 2025 |
| | #12 Ranked team at Rocky Mountain Regional Contest ▪ ICPC | 2025 |
| | Jane Street Leaderboard | |
| | Number Cross 5 | May 2025 |
| | Sum One, Somewhere | Apr 2025 |