

Devin Pohl

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I am a compiler engineer at Microsoft and recently graduated as Colorado's top-of-class in undergraduate computer engineering. I am currently applying for a PhD program in compilers, high performance computing, and hardware-software co-design.

Education

- **Colorado State University** **Fort Collins, CO**
May 2022
 - *Bachelor of Science in Computer Engineering, Minor in Mathematics, Minor in Computer Science*
 - **Academic Distinctions:**
 - *CEC Silver Medal Candidate:* Recognized as the number one computer engineering undergraduate in all of Colorado
 - *summa cum laude*, 4.0 GPA
 - **Relevant Coursework:** Compilers, Fault Tolerant Computing, Computer Micro-Architecture, VLSI, Software Engineering, Abstract and Discrete Mathematics, Computer Networking, Operating Systems, Analog and Digital Circuit Design





Technical Skills

- **Programming Languages:**
 - Procedural ARM Assembly, Bash, **C**, Fish, LLVM, Matlab, MIPS, Spice, Verilog
 - Object-Oriented Arduino INO, **C++**, Java, JavaScript, Python, **Rust**
 - Functional Lisp, Emacs, \LaTeX , Scala
- **Libraries and Frameworks:**
 - Graphical Native X11, XCB, Cairo, Pango, Unicode CLDR, GTK, Qt, Android API, ncurses
 - Computational Boolector, GMP, OpenMP, OpenCL, OpenGL, GLSL, Rink.rs, Sage
 - Web Based Rocket.rs, Zola, ReactJS, VueJS, NodeJS, ExpressJS, jQuery

Work Experience

- **Platform Engineering Intern** **Fort Collins, CO**
May 2021 – Aug 2021
 - *Hewlett Packard Enterprise – NonStop Low-Level Team*
 - Designed a performance modeling library to mock enterprise-grade RDMA behavior without dedicated hardware
 - Proved feasibility of an implementation method that would drastically reduce startup cost for new customers
 - Worked in C with InfiniBand and NSK to invisibly apply kernel-mode modifications to existing benchmarks and applications
- **Software Development Intern** **Fort Collins, CO**
May 2020 – Aug 2020
 - *Hewlett Packard Enterprise – NonStop Manageability Team*
 - Improved and optimized OSM, the main application for maintaining, updating, and upgrading NonStop servers
 - Migrated critical security procedures from CLI to GUI, cutting down on time overhead and human error for end-users
 - Worked in Java, using Swing, AWT, RMI, and several internal HPE libraries

Notable Projects

- **Practical Program Equivalence Project** **Completed May 2022**
 - *Colorado State University – Under Dr. Yashwant Malaiya* *Department of Computer Science*
 - Wrote a tool to prove program equivalence across software versions via LLVM symbolic execution
 - Achieved non-trivial equivalence analysis on Rust and C++ code, with graphical commentary on divergence
 - Implemented using Rust; symbolic computations solved with Haybale and Boolector
- **Senior Design Project** **Completed May 2022**
 - *Colorado State University – Under Prof. Olivera Notaros* *Department of Electrical and Computer Engineering*
 - Designing and implementing an embedded systems framework for enterprise-grade quadrupedal robotics applications
 - Extending existing open-source designs to provide feature-parity with existing industry solutions at a fraction of the cost
 - Collaborating with ECE Outreach to excite middle and high school students about Electrical and Computer Engineering
- **hotpatch** **v0.3.0 Released Feb 2021**
 -  *Shizcow/hotpatch*  *docs.rs/hotpatch*
 - Rust crate for cross-platform hot-reloading of functions and methods at runtime as easily as possible
 - Guarantees memory safety, thread safety, deadlock protection, type correctness, and name-space parity
- **dmenu-rs** **v5.5.1 Released Dec 2020**
 -  *Shizcow/dmenu-rs*  *arch::aur::dmenu-rs*
 - A program launcher, unit-aware calculator, spellchecker, search engine dispatcher, and general purpose menu for Linux
 - A port of the popular GNU utility dmenu to Rust, garnering thousands of users and 100+ stars on GitHub