Ross M. Bayer

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EDUCATION

Rochester Institute of Technology   August 2012 - Present
Major: B.S./M.S. Computer Science
Expected Graduation: December 2018
GPA: 3.2

TECHNICAL SKILLS

Proficient Languages: C, Go, Java, Python, Ruby, Standard ML
Familiar Languages: Haskell, JavaScript, Prolog, Rust, Scheme
Operating Systems: Linux (Arch and Debian based), Mac OS X
Tools: Git, LaTeX, Make, CMake, Regular Expressions, Vim

EXPERIENCE

Rochester Institute of Technology   February 2016 - Present
Reserach Assistant   https://mlton.org

Re-implementing MLton's build system to support modern architectures and techniques and improving overall build quality. Switching from GNU Make and a small number of handwritten build scripts to a CMake build system.

Hudl   June 2015 - December 2015
Software Development Intern   https://hudl.com

Primary engineer on an internal mission-critical application in the alerting pipeline. Focused on refactoring the application to be more reliable, stable, testable and overall maintainable. Implemented a handful of new features for the project that were targeted at making the web interface more friendly and then gathered user feedback to itterate on the design. Migrated the PostgreSQL database to be more consistent with SQL best practices. Creating two open-source Go packages that wrap PagerDuty and Postmark's RESTful APIs.

Rochester Institute of Technology   February 2015 - May 2015
Research Assistant   https://mlton.org

Learning about the general structure and implementation strategies of compilers. Designed a general-purpose annotation system for the **MLton compiler**.

PERSONAL PROJECTS

adhoc-prologmorphism   February 2016 - Present
Independent Study on Adhoc-Polymorphism   https://github.com/Rostepher/adhoc-prologmorphism

A collection of documents and interpreters from my independent study on Adhoc-Polymorphism in Hindley-Milner type systems.

bfi   December 2014 - Present
Optimizing Brainf*** Interpreter   https://github.com/Rostepher/bfi

An **interpreter** for the esoteric, turing complete programming language **Brainf***** written in **Rust**, utilizing a number of **optimization strategies** to exponentially decrease the number of operations and subsequently the execution time of Brainf*** programs.

libstrcmp   June 2014 - December 2014
String Distance Metric C Library   https://github.com/Rostepher/libstrcmp

An optimized **C library** dedicated to fast implementations of various **string distance** and **phonetic metrics** used in **natural language processing** and **fuzzy string matching**.

mget   June 2014
Manga Scraping Ruby Utility   https://github.com/Rostepher/mget

A Ruby utility to **scrape manga chapters** from online sources and then packages each chapter in a cbz (comic book zip) archive.

EXTRACURRICULAR
CLUBS & ACTIVITIES

Computer Science House (CSH)   https://csh.rit.edu
Alumni Memeber

A special interest house with a focus on project-based education in the field of computer science and its related sub-fields.