eric frditz

software developer

contact

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interests & languages

Construction of (Optimizing) Compilers · Algorithms & Data Structures · Concurrent & Distributed Systems
Scala · Java · Python · Go · Rust · Javascript · Swift · C# · LaTeX

education

2014 - Now · **PhD Computer Science** — University of Wisconsin - Milwaukee

Research · *'Never-Stale Intermediate Representations amidst Optimizing Transformations'*
Developing a set of algorithms which can reconstruct (locally) particular invariants of an optimizing compiler's intermediate representation after an optimization pass mutates the program's control flow graph. (Currently In-Progress)

Awards · CEAS Dean's Scholarship, Spring 2014

2011 - 2013 · **MS Computer Science** — University of Wisconsin - Milwaukee

Research · *'Optimizing the RedPrairie Distance Cache'*
Designed and implemented a cache for RedPrairie (now JDA)'s Vehicular Routing Problem solver given hard runtime and space constraints. The caching strategy showed a marked improvement in the solver's throughput.

Awards · Chancellor's Graduate Student Awards (CGSA), Spring 2013
CEAS Dean's Scholarship, Fall 2013

2007 - 2011 · **BFA Film, Computer Science Minor** — University of Wisconsin - Milwaukee

Awards · Cum Laude, Dean's Honor List, Senior Honors

refereed publications

2015 · **Type Inference of Asynchronous Arrows in JavaScript** — REBLS 2015 Co-Located with SPLASH
Paper and presentation slides available at http://arrows.eric-fritz.com.

career history

2015 - Now · **Software Developer** — ShoreTel (Corvisa LLC) - Milwaukee, WI
Designed and implemented a multi-datacenter resource tracking/limiting service to increase Corvisa's PaaS reliability and uptime. Enabled transparent horizontal scaling of (dumb) SIP switches, increasing the maximum active call capacity for large clients.
Go, Python, Lua, Postgresql, Redis, Zookeeper, Riemann

2008 - 2009
2011 · **Software Developer** — ESDN, Inc. - Janesville, WI
Developed and maintained a platform aiming to streamline e-commerce operations for hundreds of jewelry retailers and brands. Designed and implemented an jewelry collection management product, and a retail locations management application; both highly-demanded by clients.
C#, ASP.NET MVC, Java, MsSQL

2011 · **Software Developer (Freelance / Contract Position)** — EMM Holdings, LLC. - Milwaukee, WI
Developed and maintained an application which managed employee scheduling for an accelerated startup. Improved testing and maintenance qualities of flagship application by introducing dedicated business logic and view application layers.
PHP, MySQL, HTML5, CSS3

teaching history

Teaching Assistant   University of Wisconsin - Milwaukee
Designed the syllabus, course structure, and focus for CS658, CS481, and CS481. Prepared assignment, quiz, exam, lecture, and lab activity for the following courses fresh each semester. Evaluated hundreds of students over eleven semesters.

Course		Title	Designed	Instructed	Assisted
CS658	-	Mobile Application Develompent Under iOS	✓	✓	
CS482	-	Rich Internet Applications	✓	✓	
CS481	-	Server-side Internet Programming	✓	✓	
CS655	-	Compiler Implementation Laboratory		✓	✓
CS251	-	Intermediate Computer Programming		✓	✓
CS744	-	Text Retrieval and Its Applications in Biomedicine			✓
CS395	-	Social, Professional, Ethical Issues			✓
CS361	-	Introduction to Software Engineering			✓
CS351	-	Data Structures and Algorithms			✓
CS315	-	Assembly Language Programming			✓
CS201	-	Introduction to Computer Programming			✓
CS150	-	Survey of Computer Science			✓