

software developer

education

- 2014 - Now **PhD Computer Science** Milwaukee, WI
University of Wisconsin - Milwaukee
◊ *'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.
- Spring 2014 ◊ CEAS Dean's Scholarship
- 2011 - 2013 **MS Computer Science** Milwaukee, WI
University of Wisconsin - Milwaukee
◊ *'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.
- Spring 2013 ◊ Chancellor's Graduate Student Awards (CGSA)
Fall 2013 ◊ CEAS Dean's Scholarship

career history

- 2015 - Now **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.
- 2008 - 2009 **ESDN, Inc.** Janesville, WI
2011 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.
- 2011 **EMM Holdings, LLC.** Milwaukee, WI
Software Developer (Contract)
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.

publications

- 2016 Charon: The Design of a Limiting Microservice Whitepaper, ShoreTel
- 2016 Typing and Semantics of Asynchronous Arrows in JavaScript Science of Computer Programming
- 2015 Inferring Types for Asynchronous Arrows in JavaScript REBLS'15

teaching history

- 2011 - 2016 **University of Wisconsin - Milwaukee** Milwaukee, WI
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.

CS658	- Mobile Application Development 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			✓
		Designed	Instructed	Assisted