

Leveraging theory and experience in software engineering

<http://robertdfrench.me>

Technical Skills

Languages	Platforms & Tools	Math / Research	Hobbies / Interests
<ul style="list-style-type: none">• Java, Ruby• PHP, Python, Perl• <i>Mathematica</i>, MATLAB• Javascript, Erlang	<ul style="list-style-type: none">• OS X, Linux• Rails, Symfony• DB2, MySQL, SQLite• RabbitMQ, Neo4J	<ul style="list-style-type: none">• Finite Element Analysis• Genetic Algorithms• Numerov Block Methods• Math Ed Pedagogy	<ul style="list-style-type: none">• K-5 Math Education• Effects of Poverty on Learning Outcomes• Teaching / Tutoring

Education / Research Experience

Austin Peay State University	Clarksville, TN	B.S., Mathematics, December 2012
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Research Assistant to Dr. Samuel Jator

- Streamlined *Mathematica*-based Numerical Analysis software in a team of 2
- Refactored existing software into modularized components to facilitate code reuse
- Published in *Numerical Algorithms*, <http://www.springerlink.com/index/e674516w43821148.pdf>

Research Assistant to Dr. Ben Ntatin

- Developed *Mathematica*-based Finite Element Analysis software in a team of 3
- Automatically parallelizes on adhoc cluster of *Mathematica* workstations
- Applied load-balancing techniques to solve complex problems with only a handful of machines

Software Development Experience

Korovasoft, Inc.	Clarksville, TN	December 2007 - Present
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Founder & Lead Software Engineer

- Currently developing new mobile and web infrastructure for TN Secondary School Athletic Assn
- Architected design of web-based, adaptive math workbook for K-5 using RabbitMQ and Neo4J
- Recruited and led team of 3 developers in building web-based (Ruby on Rails) purchasing software

IBM Corporation	San Jose, CA	August 2010 - December 2010
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Software Engineering Co-op, DB2 Cubing Services / Cognos ROLAP

- Prototyped new scalability enhancements for ROLAP server's internal data cache
- Researched alternative cache-update policies, analyzing the performance benefits of each
- Effectively marketed these proposals to senior architects and upper level management

IBM Corporation	San Jose, CA	May 2010 - August 2010
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Extreme Blue Technical Intern

- Developed new Java-based software analysis tools for IBM's internal PL/X and PL/I languages
- Constructed PL/X parsing and static-analysis library using JavaCC parser generator tool
- Gave several presentations to senior engineers & management persuading them to adopt our tool

VCCH, Inc.	Springfield, TN	August 2003 - September 2007
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Software Development Intern

- Led team of 3 developers in customizing an open source accounting package for gas & water utilities
- Helped bring water service into compliance with Tennessee record keeping laws
- Developed a multitude of internal tools to help support Asterisk PBX deployments