

Rich Joiner
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Seattle, WA 98125
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EDUCATION:

University of Wisconsin-Madison, Fall 2009-Fall 2011
Master of Science in Computer Science. GPA: 4.00.

GRE, November 2009
Math: 710/800, Verbal: 710/800, Writing: 5/6

Madison Area Technical College, Madison WI, May 2008
Internet Developer Certificate (5 courses), GPA: 4.00.

Davidson College, Davidson NC, May 2003
B.S. in Mathematics with a Minor in Philosophy. GPA: 3.28.

WORK EXPERIENCE:

Synopsys, Inc. (May 2015-present)
Senior Software Engineer

- lead a team in the development of a JavaScript compiler front end for static analysis
- contribute to the static analysis of JavaScript code
- implement compiler front ends for the static analysis of PHP and Python code
- triage and investigation of customer reported product issues

University of Wisconsin-Madison Computer Science Department (2010-2015)
Academic Staff/Research Assistant

- pursue two programming language/systems research projects with grants from NSF and DARPA
- implement a model-checking/policy-weaving static analysis tool for JavaScript
- modify SpiderMonkey JavaScript interpreter to implement transactional semantics
- build and maintain large testing and analysis framework to study executable program slicing
- collaborate on academic writing, theoretical analysis, system design and performance evaluation

Joiner Development LLC (2008-2012)
Website Developer and Sole Proprietor

- create, develop and maintain websites and auxiliary data management utilities for local businesses
- develop custom applications and extensions
- independently manage all aspects of business

Epic Systems Corporation – Madison, WI (2003-2007)

Team Lead: MyChart Patient Access Quality Assurance (August 2006 – October 2007)

- managed five quality assurance technicians on the MyChart Patient Access and MyEpic Executive Reporting teams
- worked closely with R&D, technical services and implementation services to steer the product in relevant directions

Quality Assurance Technician: MyChart Patient Access/EDI Medical Interfaces (August 2003 – August 2006)

- tested MyChart medical record web access software for patients; later moved to EDI team to test data interfaces
- worked to improve website reliability, usability and accessibility via manual and automated testing methods
- managed and participated in enterprise-wide testing efforts
- supported customer software go-lives on site

PUBLICATIONS:

Joiner, R., Reps, T., Jha, S., Dhawan, M., and Ganapathy, V., Efficient runtime-enforcement techniques for policy weaving. In *Proc. Foundations of Software Engineering (FSE)*, 2014.

Aung, M., Horwitz, S., Joiner, R., and Reps, T., Specialization slicing. In *ACM Trans. on Program. Lang. and Syst.* 36, 2, Article 5 (July 2014), 67 pages.

Fredrikson, M., Joiner, R., Jha, S., Reps, T., Porras, P., Saïdi, H., and Yegneswaran, V., Efficient runtime policy enforcement using counterexample-guided abstraction refinement. In *Proc. Computer-Aided Verification (CAV)*, 2012.

SKILLS:

Programming Languages and Frameworks:

Expertise in C, C++, CSS, Datalog (XSB), HTML/XHTML, Linux, Java, Javascript, PHP, Python, XUL, Yices
Experience with C#, Caché, Drupal, Flash/ActionScript, Haskell, OCAML, Prolog, Scheme

Computer Applications:

Familiar with internals of Chrome, Closure (Google JavaScript compiler), Firefox, Gecko, SpiderMonkey, Webkit, V8
Proficient with Eclipse, Git, GIMP (image processing), GNU/Linux utilities, Google Adwords, Google Analytics,
MetaSploit, Microsoft Office 20xx, Reaper (audio processing), SVN, Thunderbird, Vim, VirtualBox, VMWare, WALA
(IBM JavaScript analysis), Windows Visual Studio 20xx

INDEPENDENT EDUCATION:

Malicious Software and It's Underground Economy - University of London via Coursera.org (2014)
Introduction to Mathematical Philosophy - Ludwig-Maximilians-Universität München via Coursera.org (2014)
Astrotech: The Science and Technology Behind Astronomical Discovery - University of Edinburgh via Coursera.org (2014)
The Science of the Solar System - California Institute of Technology via Coursera.org (2014)
Confronting the Big Questions: Highlights of Modern Astronomy - University of Rochester via Coursera.org (2014)
An Introduction to Functional Analysis - École Centrale Paris via Coursera.org (2014)
Introduction to Genetics and Evolution - Duke University via Coursera.org (2014)
Exploring Quantum Physics - University of Maryland, College Park via Coursera.org (2013)
Digital Signal Processing - École Polytechnique Fédérale de Lausanne via Coursera.org (2013)
Introduction to Music Production - Berklee College of Music via Coursera.org (2013)
Calculus Two: Sequences and Series - Ohio State University via Coursera.org (2013)
Linear and Integer Programming - University of Colorado-Boulder via Coursera.org (2013)
From the Big Bang to Dark Energy - University of Tokyo via Coursera.org (2013)
Songwriting - Berklee College of Music via Coursera.org (2013)
Jazz Guitar, Folk and Bluegrass Jam, Country Guitar, Fingerstyle Guitar - classes in various musical styles (2007-2010)
Compose Your Own Music - online music composition course through UW-Madison (2006)

INTERESTS AND ACTIVITIES:

Theoretical Physics and Astronomy (2012-present)
Volunteer - East Coast Greenway Alliance (2013-2014)
Volunteer - UW Arboretum Habitat Restoration Team (2008-2013)
Northface Endurance Challenge Half-marathon (2011)
American Birkebeiner Cross-Country Ski Race (2008, 2009)
Blackout Jack - writing and performing (bass and vocals) with local rock band (2006-2009)
Teacher's Assistant, Davidson Math Department (2002-2003)
Davidson College Math Tutoring Program (2001-2003)
Bernard Society of Mathematics (2001-present)
Davidson College Baseball Team - Division I (1999-2001)
Audio production - recording, engineering and mixing digital audio (2005-present)
Guitar, Bass Guitar, Piano (all self-taught) (2002-present)