

**Morgan Thomas**

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## Software Engineer and Mathematician

Versatile problem-solver employing best practices in analysis, engineering, algorithms, and code.

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**Core Competencies** Delivering correct software based on solid engineering  
Clear technical communication tuned to audience and context  
Sound and innovative mathematical analysis of real-world problems  
Capable of self-management and independent learning

**Selected Skills** **Programming languages/paradigms**  
C# JavaScript C Haskell OO Functional programming  
**Software engineering**  
Web dev. Agile Linux Windows Git Subversion SW architecture  
Design patterns Automated testing/TDD  
**Computer science**  
Data structures Complexity analysis (big- $O$ , etc.) Parsing Formal languages  
**Applied math**  
Statistics and probability Data visualization Combinatorics Graph theory  
Calculus Linear algebra Numerical optimization  
**Communication**  
Documentation/technical writing Teaching Self-teaching Good listener

**Professional Experience** **Developer. IHS Markit. Oct. 2015 – present.**  
Reliably keep Capital Group from going off the rails as maintenance dev. Wrote a tool for capturing, analyzing and visualizing client-side performance data. Took responsibility for migrating ODA Dashboard and helped fix a bunch of gnarly bugs; worked effectively with no team lead to report to.

**JavaScript Instructor. Saisoft, Inc. (contractor for).  
Nov. 2015 – Dec. 2015.**  
Trained IT professionals in JavaScript using self-developed courseware.

**Independent R&D** **Yoga. May 2015 – present.**  
<https://github.com/morganthomas/yoga>  
New approach to developing Web pages without using HTML and CSS. Uses novel layout algorithm describing page layout problem as one continuous numerical optimization problem. Promises to produce fast, high quality page layout with great range of design possibilities.

**Education** **RefactorU. Full-stack JS bootcamp graduate. Jun. 2015 – Aug. 2015.**

**University of Connecticut. Philosophy, MA. 2013 – 2015.**  
Math and philosophy research resulted in three publications in top journals. Cumulative GPA 4.1.

**Arizona State University. Psychology, BS. 2009 – 2013.**  
Minors, Mathematics and Philosophy. Thesis on philosophy of computation. Cumulative GPA 3.83.

**Academic Honors** Top scorer, Putnam Mathematical Competition at Arizona State University. 2013.  
National Merit Scholar. 2009.