Timothy Johnson

Personal Data

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Work Experience

September 2017 June 2017	Software Engineering Intern, Google. Full-stack web development on an internal tool for managing TODOs. I created a page that displays various metrics about the health of a project.
September 2016 June 2016	Software Engineering Intern, Google. Full-stack web development for Course Builder, an open source platform for hosting online courses on Google App Engine. I added visualizations of the prerequisite graph of skills in a course, so that students can navigate it more easily.
September 2015 June 2015	Software Engineering Intern, Garmin International, Inc. Maintained navigation systems for various models of Mercedes Benz cars. Improved tools for analyzing drive test logs, both by enhancing usability and adding features. Wrote reports for Daimler on GPS positioning issues. Monitored and updated nightly regression tests.

TA Experience	
Winter 2017	Formal Languages and Automata
Winter 2016	Computational Geometry
Fall 2014	Introduction to Algorithms
Summer 2014	Introduction to Python

Education

Current September 2013	PhD in Computer Science, University of California, Irvine GPA: 3.9/4.0
June 2013 September 2010	B.S. in Mathematics, California Institute of Technology GPA: 3.2/4.0

Research

- Goodrich, M., Johnson, T., Torres, M. Knuthian Drawings of Series-Parallel Graphs. Poster published at Graph Drawing 2015, full paper on Arxiv: http://arxiv.org/abs/1508.03931.
  We designed and implemented an algorithm for drawing a binary series-parallel graph in linear time, using $O(n \log n)$ area, and with equal width and height.
- Current project: DARPA STAC program. The Space/Time Analysis for Cybersecurity (STAC) program seeks to enable analysts to identify algorithmic resource usage vulnerabilities in software at levels of scale and speed great enough to support a methodical search for them in the software upon which the U.S. government, military, and economy depend.

Competitive programming

- ACM Chapter President, UCI, 2015-17. I coached students to compete in ICPC, by running algorithm practices each week. Last year, we sent a team to the World Finals.