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Julia Schwarz

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Education

Carnegie Mellon University (Pittsburgh, PA) *2009 - present*

PhD candidate.

University of Washington (Seattle, WA) *2004 - 2008*

B.S., Computer Science with College Honors, Summa Cum Laude GPA: 3.97/4.00

Employment

Google (Kirkland, WA), *Software Engineering Intern* *Summer 2009*

Worked on component of next-generation search engine. Built pipeline to store updated version of large data source, built analysis tools to generate recommendations based on this data source.

Carnegie Mellon University, *Research Intern* *Summer 2008*

Developed applications to evaluate how personal spending data can be used to sense human activity. See "Reflections of Everyday Activities in Spending Data" below. Part of the CRA-W Distributed Mentor Program.

Google (Kirkland, WA), *Software Engineering Intern* *Winter 2008*

Built a new development framework to assist prototype development of a next generation search engine. Also wrote many prototypes of search features.

Google (Kirkland, WA), *Software Engineering Intern* *Summer 2007*

Designed and implemented two high priority projects involving designing a web API and developing an interactive JavaScript UI.

UW Dept. of Computer Science, *Undergraduate Researcher* *Spring 2006, Winter 2007*

Conducted user interface research with RFID Ecosystem and Classroom Presenter teams.

UW Dept. of Computer Science, *Teaching Assistant* *Fall 2006, Spring 2007, Fall 2007*

Led section twice a week, graded assignments and exams, provided help in the introductory programming laboratory, helped struggling students.

Selected Research Projects

Handling Input With Uncertainty *Spring 2010*

Developing a framework and tools for handling input with uncertainty. Some repercussions of framework include more natural methods for handling input with uncertainty and significant improvements in existing interaction techniques such as pressing small buttons using touch input.

Cord Input: An Intuitive, High-Accuracy Input Method for Mobile Devices *Fall 2009*

Built a cord-based sensor which can detect how hard it is being pulled, twisted, and where it is touched and can be embedded in headphones and clothing to control mobile devices. First-authored paper published in ACM SIGCHI 2009 (20% acceptance rate).

Increasing RFID Awareness *Fall 2008*

Built a device which logs and visualizes when people are near RFID readers with the goal of building applications which make this invisible technology visible yet unobtrusive. Five of these prototype devices were used in study of RFID awareness at UC Irvine.

Reflections of Everyday Activities in Spending Data *Summer 2008*

Developed and evaluated four applications to illustrate how personal spending data can be used to sense human activity. First-authored paper published in ACM SIGCHI 2009 (20% acceptance rate).

Awards and Honors

First Place, UIST Student Innovation Contest *2009*

Led team (primary inventor and developer) to augment a pressure-sensitive keyboard and turn it into a multi-point, in-air interaction device. Entry won 'Most Creative' in UIST 2009 Student Innovation contest.

NSF Graduate Research Fellowship *2009-2012*

Offers the nation's research leaders of tomorrow exceptional funding with 3 years of graduate support.

Finalist, Google Anita Borg Scholarship *2009*

National scholarship honoring women in computer science.

Finalist, CRA Undergraduate Research Award *2008 – 2009*

Recognizes undergraduate students in North American universities who show outstanding research potential in an area of computing research.

ARCS Scholar *2009-2012*

National organization awarding academically outstanding scientists with a three-year stipend.

UW CSE Outstanding Senior Award *2009*

Honors top 3 graduating seniors in computer science for their exceptional undergraduate academics.

Finalist, President's Medal and Dean's Medal *2009*

Honors graduating seniors for their academic performance within the University of Washington.

Goldwater Scholar *2006-2007*

National scholarship to support "American undergraduate students with excellent academic records and outstanding potential."

Member of Phi Beta Kappa 2007-*Present*

National academic honor society.

CSE Award for Excellence *2007*

For outstanding performance in computer science.

UW Presidential Freshman Medalist *2004-2005*

For the "highest scholastic standing for the first year of coursework." Awarded annually to the single highest achieving freshman of the UW among a class of about 9,000.

Invited Talks and Presentations

SIGGRAPH 2009 Emerging Technologies *2009*

Helped develop and present Scratch Input (http://www.chrisharrison.net/projects/scratchinput/). New Orleans, LA. August 3-7.

Other Activities

Founder and President, Jugglers at UW *2005-2008*

Organize juggling meetings, classes, performances. Promote juggling at University of Washington.

PSIA Certified Level 1 Ski Instructor *2008*

Ski Training Director, Husky Winter Sports 2008

Publications

Schwarz, J., Harrison, C., Hudson, S., and Mankoff, J. 2010. Cord input: an intuitive, high-accuracy, multi-degree-of-freedom input method for mobile devices. In Proceedings of the ACM Conference on Human Factors in Computing Systems, 1657-1660.

Schwarz, J., Mankoff, J., and Matthews, H. S. 2009. Reflections of everyday activities in spending data. In *Proceedings of the 27th international Conference on Human Factors in Computing Systems* (Boston, MA, USA, April 04 - 09, 2009). CHI '09. ACM, New York, NY, 1737-1740.