

Serena Booth

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📄 slbooth.com

I aspire to design useful robots by fundamentally understanding both robotics technology and the implicit contracts within human-robot interaction.

Education

- 2016 B.A., Computer Science with in-field Highest Honors, 3.79 GPA, Harvard University.
 - Thesis advised by Prof. Radhika Nagpal (see publication below).
 - *Awarded Thomas T. Hoopes thesis prize for excellence in undergraduate research.*

Publication—Peer-reviewed Conference

- 2017 Serena Booth, James Tompkin, Hanspeter Pfister, Jim Waldo, Krzysztof Gajos, Radhika Nagpal, *Piggybacking Robots: Human-robot Overtrust in University Dormitory Security*, ACM/IEEE International Conference on Human-Robot Interaction (HRI).
 - Webpage with video: http://www.slbooth.com/piggybacking_robots.html
 - Press: Vice, Vocativ, FujiTV (Video, Japanese), Soonish: Ten Emerging Technologies (Weinersmith and Weinersmith, Penguin, 2017).

Research Experience

- 2017 20% Project, Human-robot Interaction, Google[X].
 - Project details proprietary.
- 2016 Wyss Institute, Harvard / Le Laboratoire, Cambridge / Strate École de Design, Paris.
 - Collaborative summer research exploring the creation of growing shape-changing fabric through a combination of origami-inspired pleats and an interwoven shape memory alloy.
- 2015–2016 Research Assistant & Teaching Fellow, Harvard University.
 - CS189: Autonomous Robot Systems.
 - Implemented new TurtleBot robotic platform in place of E-Pucks.
 - Developed six courseworks, from tabletop-bound projects to building-wide projects.
 - CS121: Theory of Computation.
 - CS1: Great Ideas in Computer Science.
 - Held weekly sections (10-15 students), wrote problem sets, held office hours, graded work.
- 2014 EngageCSEdu: Student Researcher, Google Research & NCWIT, www.engage-csedu.org.
 - Researched deterrents to women & minorities studying CS, aggregated inclusive CS course materials.
- 2011–2012 [Gap Year] Imagineer, Walt Disney Imagineering Research & Development.
 - Ran field tests in Orlando & Paris to study hotel towel reuse and park guest distribution.
 - Designed data collection format for Disney-supported micro-entrepreneurs' cinemas in Vietnam.

Industry Experience

- 2016–** Associate Product Manager, Google.
 - Current: ARCore platform for augmented reality. Create product story for designing and evaluating 6DoF motion tracking and scene understanding, for setting performance targets, for scaling calibration, and for measuring platform success.
 - Previous: Worked on cars, motorbikes, lottery, and dinosaurs on Google Search.
- 2015 Software Engineering Intern, Engineering for Retail, Apple.
 - Project details proprietary until patented. C++, Obj-C, Swift, Python, OpenCV, Git.

Industry Experience—Continued

- 2014 Software Engineering Intern, Payments & Commerce Solutions, Intuit.
 - Created health check for invoice routing system, created an interactive portal to view and evaluate invoice routing APIs, wrote API and unit tests. Java, JavaScript, and test frameworks.
- 2013 Researcher-Writer, *Let's Go: The Student Travel Guide*, Berlin, Germany.
 - Wrote over 400 travel listings, published in *Let's Go Budget Berlin* and *Let's Go Europe*.

Mentoring & Volunteering

- 2017 FIRST Robotics Mentor, Girl Scouts, NASA Ames.
 - Reality, Virtually, Hackathon Mentor, MIT Media Lab.
 - Botball Robotics Competition Judge, NASA Ames.
 - CS4HS Application Reviewer, Google.
 - Society of Women Leaders Retreat Panelist, Stanford University.
- 2015–2016 Women in CS Mentor to Underclassmen, Harvard University.
- 2014–2015 WeCode (Women Engineers Code) Volunteer, Harvard University.
- 2012–2015 NCWIT Aspirations in Computing Application Reviewer.

Awards and Grants

- 2016 Thomas T. Hoopes Prize for Excellence in Undergraduate Research, Harvard University.
 - Nominated by Profs. Nagpal & Waldo for thesis on overtrust in robots compromising physical security.
- 2016 Summer Idea Translation Fellowship, Harvard Paulson SEAS, Wyss Institute.
 - Awarded to develop Alter, a growing and shape-changing fabric.
- 2015 Best Beaker Application, Hackathon hosted by Two Sigma Investments.
 - Conducted a data-driven investigation into relationship between graffiti and gentrification in NYC.
- 2015 Honorable Mention, *Collegiate Award*, NCWIT.
 - Showcased SwimSwallow, a swimming robot constructed from acrylic.
- 2014 Grant Recipient, *Nectar Funding*, Harvard School of Engineering and Applied Sciences.
 - Developed BrainBall, an EEG-controlled cat toy.
- 2011 National Winner, *Aspirations in Computing*, NCWIT.