

# Rebecca Funke

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## EDUCATION

**University of Southern California** Los Angeles, California Fall 2016 - Present

- *PhD candidate*, Computer Science (GPA 3.93/4.0)
- Annenberg Graduate Fellowship: Full tuition and stipend awarded for exhibiting promise in cross-disciplinary work

**University of Richmond**, Richmond, Virginia Spring 2016

- *Bachelor of Science*, Mathematics with Honors (GPA 3.96/4.0)
- *Bachelor of Science*, Computer Science (GPA 4.0/4.0)
- Richmond Science Scholar: 1 of 12 full-ride scholarships recognizing success and passion in STEM

## WORK EXPERIENCE

**Instructor**, Girls Who Code Summer 2017

- Taught 20 high school students in a 7 week intensive introduction to computer science
- Guided 5 groups from brainstorming through Scrum development practices to final minimum viable software products on iOS, Android, and Unity platforms
- Negotiated with Girls Who Code headquarters to donate the 20 laptops to the girls in my class
- Continue to mentor groups beyond the program now applying to GirlsWhoBuild and Technovation

**Curriculum Director**, Robotics Coding Academy Fall 2016 - Present

- Designed a robotics curriculum for a 24-week after school program for 75 4th grade students attending 3 different low-resourced schools in Los Angeles
- Hired 12 mentors to work with students and led monthly training sessions for the mentors
- Instituted weekly progress reports from mentors and adjusted future curriculum according to feedback

## RESEARCH EXPERIENCE

**Artificial Intelligence for Social Good**, University of Southern California Fall 2016 - Present

- Built a machine learning algorithm that categorizes length of homelessness with 80% accuracy
- Held monthly meetings with social work practitioners to collect data and feedback on the algorithm
- Introduced new feedback-driven feature that allows social work practitioners to give insight into the prediction

**Coding Theory and Difference Sets**, University of Richmond Fall 2012 - Spring 2016

- Developed an algorithmic approach to construct all 6 variable bent functions (used for error correction in communication protocols) using smaller subfunctions within a matter of minutes, a task that previously took months
- Introduced a new technique to construct complicated association schemes via easier to understand difference sets, making association schemes more viable in coding theory
- Presented this research to the NSA, the Joint Math Conference, and the Richmond Symposium
- Awarded the national Barry Goldwater Scholarship for producing prestigious undergraduate research

## PROJECTS

**HEALER Project**, Class Project, *AI for Social Good Course* Spring 2017

- Worked in a cross-functional team of engineers and social workers to create an algorithm that assists social workers in choosing which peer leaders to train about sexual health to maximize spread of the information
- Designing a user study for a network of 100 women in Los Angeles that will be deployed late fall 2017

**Project Accessibility**, Personal Project Spring 2013 - Spring 2016

- Consulted with over 30 residents in a home for people with disabilities, modifying their consumer hardware to ease use with their disability
- Found simple solutions with big improvements to residents' autonomy and satisfaction

**Shoperone**, Class Project, *Technology, Cognition and Behavior* Spring 2014 - Spring 2015

- Collaborated with 4 engineers and 3 special-need instructors to develop Shoperone, an iOS application used by instructors to assist with grocery shopping for young adults with Autism
- Reduced paperwork and manual plotting of data by 3 hours per instructor per week

**MLA13**, Personal Project Spring 2012

- Defined a Latex package that formats documents in MLA format
- Attained over 35,000 downloads and now used as a template in popular Latex editors such as ShareL<sup>A</sup>T<sub>E</sub>X and Overleaf

## EXTRA CURRICULARS

**PhD Committee Member** Fall 2017 - Present

- Re-established the computer science PhD committee, recruiting 10 new members
- Secured \$10,000 of funding from the department for social events such as retreats and lunches