

ANNE SPENCER ROSS

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I am a PhD student in the Paul G. Allen School of Computer Science & Engineering at the University of Washington. My broad interests are in Human-Computer Interaction. I am passionate about enabling diverse groups of people to access, interact with, and communicate through technology. I am currently working with James Fogarty and Jacob O. Wobbrock on making mobile applications more accessible to people with disabilities.

EDUCATION

University of Washington, Seattle, WA

Ph.D. Student, Computer Science & Engineering, GPA: 3.92

2015 – present

Focused in Human-Computer Interaction and Accessibility

Colorado State University, Fort Collins, CO

B.S. in Computer Science, Magna Cum Laude with Honors, GPA: 3.99

2012 – 2014

Thesis: *Examination of the Dedicated Research Assistant (DESA) System Usability and Effectiveness*

University of California Santa Cruz, Santa Cruz, CA

Major: Film Production, Minor: Statistics, GPA: 3.95

2010 – 2012

AWARDS AND SERVICE

Best Paper Nominee, *ASSETS 2018*

2018

Best Paper Nominee, *ASSETS 2017*

2017

Graduate Research Fellowship, *National Science Foundation*

2017

2nd Place, ACM Graduate Research Competition, *Grace Hopper Celebration of Women in Computing*

2016

Honorable Mention, Graduate Research Fellowship, *National Science Foundation*

2016

Wilma Bradley Endowed Fellowship in Computer Science & Engineering, *Univ. of Washington*

2015 – 2016

Natural Sciences Undergraduate Fellowship, *Colorado State Univ.*

2014

Frances Allen Scholarship in Computer Science, awarded 2 years, *Colorado State Univ.*

2013 – 2014

Dean's Honors: Fall, Spring, *Colorado State Univ.*

2012 – 2013

Ram Transfer Scholarship for Academic Achievement, awarded 2 years, *Colorado State Univ.*

2012 – 2014

Dean's Honors: Fall, Winter, and Spring, *Univ. of California Santa Cruz*

2010 – 2012

SELECT PUBLICATIONS

Examining Image-Based Button Labeling for Accessibility in Android Apps through Large-Scale Analysis

2018

Anne Spencer Ross, Xiaoyi Zhang, Jacob O. Wobbrock, James Fogarty

ASSETS 2018, BEST PAPER NOMINEE

Robust Annotation of Mobile Application Interfaces in Methods for Accessibility Repair and Enhancement

2018

Xiaoyi Zhang, Anne Spencer Ross, James Fogarty

UIST 2018

Values, Identity, and Social Translucence: Neurodiverse Student Teams in Higher Education

2018

Annuska Zolyomi, Anne Spencer Ross, Arpita Bhattacharya, Lauren Milne, Sean Munson

CHI 2018

Interaction Proxies for Runtime Repair and Enhancement of Mobile Application Accessibility

2017

Xiaoyi Zhang, Anne Spencer Ross, Anat Caspi, James Fogarty, Jacob O. Wobbrock

CHI 2017

Epidemiology as a Framework for Large-Scale Mobile Application Accessibility Assessment

2017

Anne Spencer Ross, Xiaoyi Zhang, James Fogarty, Jacob O. Wobbrock

ASSETS 2017, BEST PAPER NOMINEE

PROFESSIONAL EXPERIENCE

University of Washington | **Research Assistant**

DUB GROUP, Advisors: James Fogarty, Jacob O. Wobbrock

2015 – present

Exploring ways to conceptualize, assess, and repair smartphone accessibility for people with disabilities.

Developed a conceptual framework for identifying and fixing accessibility barriers in mobile apps. This framework expands the view of app accessibility to draw attention to under-studied factors that impact accessibility such as source code, tools, company and governmental roles, and social norms.

Microsoft Research, Redmond | **Graduate Research Intern**

ABILITY AND ENABLE GROUPS, Mentors: Ed Cutrell, Meredith Ringel Morris, Alex Fiannaca, Melanie Kneisel
 Prototyped an audio-based, virtual navigation app to explore how such an experience could help people with vision impairments familiarize themselves with an area and be more motivated and comfortable exploring.

Summer 2018

University of Washington | **Research Assistant**

DUB GROUP, Mentor: Sean Munson
 Explored how technology can support higher education students with Autism in teamwork settings. Designed and conducted interviews with students with Autism using modified open-ended questions, value statement ranking (Q-methodology), and a collage activity to engage individuals who may not always strongly respond to standard conversational interviewing.

2016 – 2018

ARK LAB, Mentor: Noah Smith

Explored how working with a machine in the loop on creative writing may help creativity. Through a user study of prototype creative writing systems, we presented common attitudes, experiences, and thoughts on machine-in-the-loop writing. These insights guide the development of new language models that will better provoke human creativity.

2017

Colorado State University | **Undergraduate Research Assistant**

HCI AND AI LABS, Advisors: Jamie Ruiz, Adele Howe
 Designed and implemented a personalized web search assistant and conducted usability studies
 Explored using a mobile phone accelerometer and gyroscope to identify individuals and their activities

2013 – 2014

Naval Postgraduate School | **Naval Research Enterprise Internship Program Intern**

Investigated using Naïve Bayes classifiers to classify characteristics of Twitter users based on tweets

Summer 2013

University of Maryland, Baltimore County | **Researcher at REU Site: Interdisciplinary Program in High Performance Computing**

Developed visualizations for and determined appropriate statistical analysis of water quality data. The visualization GUI presented novel interactions between different features in the data. Was presented to colleges at the department of natural resources as a potential means for researchers and the public to understand the data.

Summer 2012

University of Colorado Denver | **Summer Education and Training Intern**

Produced instructional films on research methods being used in a psychiatric lab. These films provided a more accessible way to inform participants and the public about research methods. One is presented on the lab's website and at community outreach events. One video was published as a technique for explaining methods to researchers for replication.

Summer 2011

TEACHING EXPERIENCE

University of Washington, Seattle, WA

Teaching Assistant – “Introduction to HCI” (CSE 440)

Professor: James Fogarty. Ran two sections and aided in project feedback, assignment rubrics, and grading.

Winter 2019

Teaching Assistant – “Advanced Topics in HCI” (CSE 510)

Professor: James Fogarty. Aided in project feedback and assignment design.

Spring 2017

PROFESSIONAL AND PERSONAL MENTORING

Women in Science and Engineering Bridge REU Mentor

Worked with two students on a summer research project, resulting in a poster and oral presentation
 Annie Hanson (incoming 1st year)
 Maryam Bahadori-Nejad (incoming 1st year)

Summer 2017

Individual Students Mentored

Ishaan Chainani (summer high school research intern)

Summer 2017

Undergraduate Mentor

Through the ACM-W, I mentor two women undergraduate computer science students; I answer questions about school and technology careers

2017 – *present*

New Graduate Student Mentor

Mentored four incoming PhD graduate students during their first year

2016

Smartphone Tutor

Assist an individual with low-vision with learning to use a smartphone

2016 – 2018

Computer Tutor

Assisted an individual learn basic computer skills

2012 – 2014

SERVICE

Research Exploration Lead: OurCS@UW+AccessComputing Workshop for undergraduate women with disabilities	2019
Created and ran an R tutorial for a quantitative methods course	2019
SIGACCESS Volunteer: created student volunteer assistant training	2018 – <i>present</i>
DUB Student Coordinator	2018 – <i>present</i>
CHI Student Volunteer	2016, 17, 18
Computer Science & Engineering HCI Student Skill Share Coordinator	2017
Computer Science & Engineering New Graduate Students Orientation Coordinator	2016
Computer Science & Engineering New Graduate Students Mentoring Coordinator	2016

SELECT INVITED PRESENTATIONS

<i>An Epidemiology-Inspired, Large-Scale Analysis of Mobile App Accessibility</i> Anne Spencer Ross IRESEARCH FAIR, UNIV. OF WASHINGTON	2019
<i>An Epidemiology-Inspired, Large-Scale Analysis of Mobile App Accessibility</i> Anne Spencer Ross COMPUTER SCIENCE & ENGINEERING RESEARCH DAY, UNIV. OF WASHINGTON	2018
<i>Epidemiology as a Framework for Large-Scale Mobile Application Accessibility Assessment</i> Anne Spencer Ross COMPUTER SCIENCE & ENGINEERING RESEARCH DAY, UNIV. OF WASHINGTON	2017
<i>Supporting Equity in Smartphone Accessibility with Third-Party Repair Tools</i> Anne Spencer Ross SCHOLAR'S STUDIO, UNIV. OF WASHINGTON	2016

ADDITIONAL PUBLICATIONS

<i>Creative Writing with a Machine in the Loop: Case Studies on Slogans and Stories</i> Elizabeth Clark, Anne Spencer Ross , Chenhao Tan, Yangfeng Ji, Noah Smith IUI 2018	2018
<i>Value Sensitive Design for Neurodiverse Teams in Higher Education</i> Annuska Zolyomi, Anne Spencer Ross , Arpita Bhattacharya, Lauren Milne, Sean Munson ASSETS 2017	2017
<i>MEGARes: an Antimicrobial Resistance Database for High Throughput Sequencing</i> Steven M. Lakin, Chris Dean, Noelle R. Noyes, Adam Dettenwanger, Anne Spencer Ross , Enrique Doster Pablo Rovira, Zaid Abdo, Kenneth L. Jones, Jaime Ruiz, Keith E. Belk, Paul S. Morley, Christina Boucher NUCLEIC ACIDS RESEARCH, VOL. 45, ISSUE D1, 4 JANUARY 2017, PP. D574–D580	2016
<i>Tweet!—and I Can Tell How Many Followers You Have</i> Christine Klotz, Annie Ross , Elizabeth Clark, Craig Martell RECENT ADVANCES IN INFORMATION AND COMMUNICATION TECHNOLOGY, VOL. 265, PP. 245-253	2014
<i>P50 Sensory Gating in Infants</i> Anne Spencer Ross , Sharon Kay Hunter, Mark A Groth, Randal Glenn Ross JOURNAL OF VISUALIZED EXPERIMENTS, 50065	2013
<i>Assessment of Statistical Methods for Water Quality Monitoring in Maryland's Tidal Waterways</i> Rosemary K. Le, Christopher V. Rackauckas, Anne S. Ross , Nehemias Ulloa SIAM UNDERGRADUATE RESEARCH ONLINE, VOL. 6	2013

WORKSHOPS

<i>Use Cases and Impact of Audio-Based Virtual Exploration</i> Anne Spencer Ross , Edward Cutrell, Alex Fiannaca, Melanie Kneisel, Meredith Ringel Morris POSITION PAPER, CHI 2019 BLIND NAVIGATION WORKSHOP	2019
<i>An Epidemiology-Inspired, Large-Scale Analysis of Mobile App Accessibility</i> Anne Spencer Ross ASSETS 2018 DOCTORAL CONSORTIUM PARTICIPANT	2018

POSTERS AND PRESENTATIONS

- Supporting Equity in Smartphone Accessibility with Third-Party Repair Tools* 2016
 Anne Spencer Ross
 ACM STUDENT RESEARCH COMPETITION, GRACE HOPPER CELEBRATION, AWARDED 2ND PLACE, [POSTER, PRESENTATION]
- Using Bayesian Statistics on Twitter Feeds to Classify Twitter Users* 2014
 Anne Ross, Elizabeth Clark, Christina Klotz, Craig Martell
 CELEBRATE UNDERGRADUATE RESEARCH AND CREATIVITY SHOWCASE, COLORADO STATE UNIV. [POSTER]
- Using Bayesian Statistics on Twitter Feeds to Classify Twitter User* 2014
 Anne Ross, Elizabeth Clark, Christina Klotz, Craig Martell
 AMERICAN MATHEMATICAL ASSOCIATION'S SECTIONAL MEETING, [PRESENTATION]
- Water Quality Monitoring in the Chesapeake Bay* 2013
 Anne S. Ross, Rosemary K. Le, Christopher V. Rackauckas, Nehemias Ulloa, Sai Popuri, Nagaraj Neerchal, Brian Smith
 CELEBRATE UNDERGRADUATE RESEARCH AND CREATIVITY SHOWCASE, COLORADO STATE UNIV. [POSTER]
- A Powerful New Tool for Visualizing Water and Habitat Quality Data* 2012
 Brian Smith, Rosemary K. Le, Christopher V. Rackauckas, Anne S. Ross, Nehemias Ulloa, Sai Popuri, Nagaraj Neerchal
 MARYLAND WATER MONITORING COUNCIL'S ANNUAL CONFERENCE [POSTER]
- Visualization and Analysis Tool for Water Quality Monitoring in the Chesapeake Bay* 2012
 Anne S. Ross, Rosemary K. Le, Christopher V. Rackauckas, Nehemias Ulloa, Sai Popuri, Nagaraj Neerchal, Brian Smith
 ROCKY MOUNTAIN CELEBRATION OF WOMEN IN COMPUTING [POSTER]
- A Powerful New Tool for Visualizing Water and Habitat Quality Data* 2012
 Brian Smith, Rosemary K. Le, Christopher V. Rackauckas, Anne S. Ross, Nehemias Ulloa, Sai Popuri, Nagaraj Neerchal
 ATLANTIC ESTUARINE RESEARCH SOCIETY FALL MEETING [POSTER]
- Water Quality Monitoring of Maryland's Tidal Waterways* 2012
 Anne S. Ross, Rosemary K. Le, Christopher V. Rackauckas, Nehemias Ulloa, Sai Popuri, Nagaraj Neerchal, Brian Smith
 SUMMER UNDERGRADUATE RESEARCH FEST [POSTER]
- Using Video to Teach Research Methods* 2011
 Anne Spencer Ross, Mark A Groth, Sharon Kay Hunter, Ali Newton, Kim Muhlhauser, Elizabeth Calvin, Randal Glenn Ross
 CONTE CENTER SUMMER RETREAT, AWARDED TOP POSTER [POSTER]
- Chimeric Animal Stroop Task for Young Children* 2011
 Anne Spencer Ross, Mark A Groth, Sharon Kay Hunter, Kim Muhlhauser, Elizabeth Calvin, Randal Glenn Ross
 DEVELOPMENTAL PSYCHIATRY RESEARCH LAB'S WEBSITE, UNIV. OF COLORADO DENVER [INSTRUCTIONAL VIDEO]