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, Manga 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

Creative Writing with a Machine in the Loop: Case Studies on Slogans and Stories   2018
Elizabeth Clark, Anne Spencer Ross, Chenhao Tan, Yangfeng Ji, Noah Smith
IUI 2018

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   Summer 2018
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.

University of Washington | **Research Assistant**
DUB GROUP, Mentor: Sean Munson   2016 – 2018
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.

ARK LAB, Mentor: Noah Smith   2017
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.

Colorado State University | **Undergraduate Research Assistant**   2013 – 2014
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

Naval Postgraduate School | **Naval Research Enterprise Internship Program Intern**   Summer 2013
Investigated using Naïve Bayes classifiers to classify characteristics of Twitter users based on tweets

University of Maryland, Baltimore County | **Researcher at REU Site: Interdisciplinary Program in High Performance Computing**   Summer 2012
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.

University of Colorado Denver | **Summer Education and Training Intern**   Summer 2011
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.

TEACHING EXPERIENCE
University of Washington, Seattle, WA
Teaching Assistant – "Introduction to HCI" (CSE 440)   Winter 2019
Professor: James Fogarty. Ran two sections and aided in project feedback, assignment rubrics, and grading.

Teaching Assistant – "Advanced Topics in HCI" (CSE 510)   Spring 2017
Professor: James Fogarty. Aided in project feedback and assignment design.

PROFESSIONAL AND PERSONAL MENTORING
Women in Science and Engineering Bridge REU Mentor   Summer 2017
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)

Individual Students Mentored   Summer 2017
Ishaan Chainani (summer high school research intern)

Undergraduate Mentor   2017 – *present*
Through the ACM-W, I mentor two women undergraduate computer science students; I answer questions
about school and technology careers

New Graduate Student Mentor   2016
Mentored four incoming PhD graduate students during their first year

Smartphone Tutor   2016 – 2018
Assist an individual with low-vision with learning to use a smartphone

Computer Tutor   2012 – 2014
Assisted an individual learn basic computer skills

SERVICE

Research Exploration Lead: OurCS@UW+AccessComputing Workshop for Undergraduate Women with Disabilities	2019
Created and ran an R tutorial	
SIGACCESS Volunteer: created student volunteer assistant training	2018 – *present*
DUB Student Coordinator	2018 – *present*
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

An Epidemiology-Inspired, Large-Scale Analysis of Mobile App Accessibility — 2019
Anne Spencer Ross
IRESEARCH FAIR, UNIV. OF WASHINGTON

An Epidemiology-Inspired, Large-Scale Analysis of Mobile App Accessibility — 2018
Anne Spencer Ross
COMPUTER SCIENCE & ENGINEERING RESEARCH DAY, UNIV. OF WASHINGTON

Epidemiology as a Framework for Large-Scale Mobile Application Accessibility Assessment — 2017
Anne Spencer Ross
COMPUTER SCIENCE & ENGINEERING RESEARCH DAY, UNIV. OF WASHINGTON

Supporting Equity in Smartphone Accessibility with Third-Party Repair Tools — 2016
Anne Spencer Ross
SCHOLAR'S STUDIO, UNIV. OF WASHINGTON

ADDITIONAL PUBLICATIONS

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

Value Sensitive Design for Neurodiverse Teams in Higher Education — 2017
Annuska Zolyomi, Anne Spencer Ross, Arpita Bhattacharya, Lauren Milne, Sean Munson
ASSETS 2017

MEGARes: an Antimicrobial Resistance Database for High Throughput Sequencing — 2016
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

Tweet!—and I Can Tell How Many Followers You Have — 2014
Christine Klotz, Annie Ross, Elizabeth Clark, Craig Martell
RECENT ADVANCES IN INFORMATION AND COMMUNICATION TECHNOLOGY, VOL. 265, PP. 245-253

P50 Sensory Gating in Infants — 2013
Anne Spencer Ross, Sharon Kay Hunter, Mark A Groth, Randal Glenn Ross
JOURNAL OF VISUALIZED EXPERIMENTS, 50065

Assessment of Statistical Methods for Water Quality Monitoring in Maryland's Tidal Waterways — 2013
Rosemary K. Le, Christopher V. Rackauckas, Anne S. Ross, Nehemias Ulloa
SIAM UNDERGRADUATE RESEARCH ONLINE, VOL. 6

WORKSHOPS

Use Cases and Impact of Audio-Based Virtual Exploration — 2019
Anne Spencer Ross, Edward Cutrell, Alex Fiannaca, Melanie Kneisel, Meredith Ringel Morris
POSITION PAPER, CHI 2019 BLIND NAVIGATION WORKSHOP

An Epidemiology-Inspired, Large-Scale Analysis of Mobile App Accessibility — 2018
Anne Spencer Ross
ASSETS 2018 DC PARTICIPANT

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]