# Simran Bhatia

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## RESEARCH INTERESTS

My research interest is the intersection of accessibility, mixed reality (XR), and human-centered data science. I strive to explore how emerging XR and AI technologies can empower people with disabilities and promote equity.

## EDUCATION

**UNIVERSITY OF CALIFORNIA, BERKELEY** | Aug 2020 - Aug 2021
M.S. Information & Data Science

**UNIVERSITY OF WASHINGTON** | Sept 2016 - June 2020
B.S. Informatics (Data Science)

## RESEARCH EXPERIENCE

**PROJECT EMAR** | March 2018 - June 2020
University of Washington, Human Centered Design & Engineering

- COVID-EMAR
    - Co-Researchers: Dr. Elin Bjorling & Dr. Patricia Alves-Oliveira
    - Analyze & develop a social robot that lives in teens' smartphones, to help measure their stressors during the pandemic 2020
- XR-EMAR
    - Co-Researchers: Dr. Elin Bjorling, Tanya Budhiraja & Stefania Gueorguieva
    - Lead a team to build & analyze the effectiveness of a WebXR platform for teens to interact with a social robot for stress reduction, during school closures.
- Immersive Teleoperation
    - Co-Researchers: Dr. Elin Bjorling, Jeff Matarrese & Savannah Ostrowski
    - Lead a team to develop & iteratively design a multi-player Virtual Reality platform for teens to experiment with design of robots.
- Sharing Stressors with Social Robot Prototypes
    - Co-Researchers: Dr. Elin Bjorling, Jeff Matarrese, Honson Ling & Kimberly Dziubinski
    - Implement mixed-method repeated measures analysis on social robot-teen interactions while comparing their stress sharing interaction across three social robot embodiments (physical, digital, virtual reality).
- Robot Designer
    - Co-Researchers: Dr. Elin Bjorling & Ada Kim
    - Design an asymmetric two-player Virtual Reality game for teens to collaborate to design social robots, and research it's effectiveness as a collaborative design method.

**ACCESS-IT** | September 2018 - June 2020
University of Washington, The Information School

- ACCESS-IT For Women
    - Co-Researchers: Dr. Hala Annai & Mina Tari
    - Conduct an independent study with mixed-methods to help investigate the importance, influence and impact of women affinity groups in tech industry
    - Collaborate on quantitative analysis of the representation of women of color in tech classes

## UW REALITY LAB  | March 2019 - June 2019
University of Washington, Computer Science & Engineering

- AR Lang
  - Co-Researchers: Nikita Haduong & Aditya Sankar
  - Develop & quantitative analyze the usability of an Android Augmented Reality game for language learning, by detecting objects around users, using Unity and Google Vision API

## PUBLICATIONS

### CONFERENCE

- Björling E., Ling H., **Bhatia S.** , Dziubinski k. (2020) "The Experience and Effect of Adolescent to Robot Stress Disclosure: A Mixed-Methods Exploration". International Conference on Social Robotics. (ICSR 2020).
- **Bhatia, Simran** ; Tari, Mina; and Annabi, Hala, "What Women Really Think of Women Affinity Groups in Tech" (2020). AMCIS 2020 Proceedings. 10.
- Ada S. Kim, Elin A. Björling, **Simran Bhatia** , and Dong Li. 2019. "Designing a Collaborative Virtual Reality Game for Teen-Robot Interactions". In Proceedings of the 18th ACM International Conference on Interaction Design and Children (IDC '19). Association for Computing Machinery, New York, NY, USA, 470–475.

### UNDER REVIEW

- Björling E., Ling H., **Bhatia S.** , Matarrese J. (2020) "Sharing Stressors with a Social Robot Prototype: What Embodiment Do Adolescents Prefer?" Special issue of International Journal of Child Computer Interaction IJCCI 2021

## TEACHING EXPERIENCE

- TA for INFO 498: Population Health Informatics, Spring 2019
  - Instructors: Mike Freeman
  - Institution: Information School, University of Washington
- Grader for MGMT 548: Dealmaking in High Velocity Ventures, Spring 2019
  - Instructors: Dr. Christina Fong
  - Institution: Foster School of Business, University of Washington
- TA for INF0 386: Professionalism in Informatics, Winter 2019
  - Instructors: Laura Schildkraut
  - Institution: Information School, University of Washington
- TA for INFO 102: Gender and Information Technology, Fall 2018
  - Instructors: Laura Schildkraut
  - Institution: Information School, University of Washington
- Grader for MGMT 547: Successful Negotiations, Fall 2018
  - Instructors: Dr. Christina Fong
  - Institution: Foster School of Business, University of Washington
- TA for UW Leadership Capstone: Leadership in Theory and Practice, Fall 2017 & Winter 2018
  - Instructors: Dr. Christina Fong & Clay Schwenn
  - Institution: Foster School of Business, University of Washington

## INDUSTRY EXPERIENCE

### PULSE LABS AI  | Research Analyst Intern
August - Sept 2020

- Conduct end-to-end mixed method user interaction studies for voice tech and deliver weekly data-driven reports focused on user satisfaction, actionable feedback and usability insights
- Collaborate with key customers to define work-flow, metrics and specifications for user studies to systematically identify development issues

## ACCOLADE INC. | Data Science Intern
June 2019 – August 2019

- Extract and analyze reasoning of Emergency Room visits as 83% of all avoidable visits, using AWS Databricks
- Build multiple machine learning models, including Recurrent Neural Networks to find the propensity of clients' ER visits based on individual health data
- Assess cross-validation metrics for each model and present a cost-benefit analysis of model implementation

## CAPGEMINI | Data Science Intern
June 2017 – Aug 2017

- Implement a Random Forest classifier based on emotional intelligence analysis of Facebook and Twitter comments from customers of telecommunication brands
- Formulate a recommendation based on results from a Logistic Regression model, for prediction of a non-profit organization's yearly donations

## AWARDS

- Husky 100
- Oculus Launch Pad 2019
- Husky Leadership Certificate 2019
- Collegiate Leadership Institiue WE'18
- Grace Hopper Celebration Scholar 2018
- Google Next Student Scholar 2018