

## Education

2019- **Ph.D. Computer Science**, Princeton University

**M.A. Computer Science**

Advisor: Olga Russakovsky

Research Interests: machine learning fairness, algorithmic bias

2015-2019 **B.S. Electrical Engineering and Computer Science**, *Philosophy minor*, UC Berkeley

Advisors: Pieter Abbeel, Aviv Tamar

Major GPA: 3.96/4.00

## Awards

National Science Foundation Graduate Research Fellowship Program (NSF GRFP)

National Defense Science and Engineering Graduate Fellowship Program (NDSEG) (declined)

Mark D. Weiser Excellence in Computing Scholarship (Merit-based award for 1-2 students in Berkeley EECS)

Regents and Chancellors' Scholar (top 2% of incoming class)

Berkeley EECS Honors Program, concentration in Philosophy

Member of Phi Beta Kappa (Academic Honor Society)

Member of Eta Kappa Nu (Electrical and Computer Engineering Honors Society)

Member of Tau Beta Pi (Engineering Honors Society)

## Publications

**Towards Intersectionality in Machine Learning: Including More Identities, Handling Underrepresentation, and Performing Evaluation**

A. Wang, V. V. Ramaswamy, O. Russakovsky. *FAccT 2022* (179/711, 25% acceptance)

**Measuring Representational Harms in Image Captioning**

A. Wang, S. Barocas, K. Laird, H. Wallach. *FAccT 2022* (179/711, 25% acceptance)

**REVISE: A Tool for Measuring and Mitigating Bias in Visual Datasets**

A. Wang, A. Liu, R. Zhang, A. Kleiman, L. Kim, D. Zhao, I. Shirai, A. Narayanan, O. Russakovsky. *IJCV 2022*

**Understanding and Evaluating Racial Biases in Image Captioning**

D. Zhao, A. Wang, O. Russakovsky. *ICCV 2021* (1617/6236, 26% acceptance)

**Directional Bias Amplification**

A. Wang, O. Russakovsky. *ICML 2021* (1184/5513, 21% acceptance)

**The Limits of Global Inclusion in AI Development**

A. Chan\*, C. T. Okolo\*, Z. Turner\*, A. Wang\*. *AAAI 2021 Workshop on Reframing Diversity in AI - Spotlight*

**Manipulative Tactics are the Norm in Political Emails: Evidence from 100K emails from the 2020 U.S. Election Cycle**

A. Mathur, A. Wang, C. Schwemmer, M. Hamin, B. M. Stewart, A. Narayanan. *Draft 2020*

**REVISE: A Tool for Measuring and Mitigating Bias in Visual Datasets**

A. Wang, A. Narayanan, O. Russakovsky. *ECCV 2020 - Spotlight* (1360/5150, 26% acceptance – 160/5150 for spotlight)

**Learning Robotic Manipulation through Visual Planning and Acting**

A. Wang, T. Kurutach, K. Liu, P. Abbeel, A. Tamar. *RSS 2019* (85/272, 31% acceptance)

## Safer Classification by Synthesis

W. Wang, A. Wang, A. Tamar, X. Chen, P. Abbeel. *NeurIPS 2017 Aligned AI Workshop*

## Work Experience

- Summer 2021 **Microsoft**, *Research Intern*, Remote
- Measure representational harms in image captioning with MSR FATE (Fairness, Accountability, Transparency, and Ethics) and Cognitive Services teams
  - Mentors: Solon Barocas, Hanna Wallach, Lijuan Wang, Zhe Gan
- Summer 2019 **Google**, *Software Engineering Intern*, Mountain View, CA
- Worked on Google Shopping infrastructure team to build out new features for metric reporting
  - Contributed side project of supplementing filtering by different metrics for fairness evaluation
- Jan 2017 - **Archer (Technology Nonprofit, [archerimpact.com](http://archerimpact.com))**, *Engineering Lead*, Berkeley, CA
- Oct 2018
- Use Node and React to build web app for conducting open source investigations based off user interviews
  - Visualize public data and create adjacency matrix scheme to manipulate entity connections using D3
  - Present products in D.C. and RightsCon 2018 in Toronto, receiving medal from U.S. Treasury
- Summer 2017 **Google**, *Engineering Practicum Intern*, Seattle, WA
- Worked on infrastructure team to improve internal streaming data processing system

## Teaching

- Spring 2021 **Fairness in Machine Learning (COS 534)**, *Teaching Assistant*, Princeton, NJ
- Fall 2020 **Fairness in Visual Recognition (COS IW 08)**, *Teaching Assistant*, Princeton, NJ
- Fall 2020 **Computer Vision (COS 429)**, *Teaching Assistant*, Princeton, NJ
- July 2020 **AI4ALL (AI for Historically Marginalized Talent)**, *Instructor*, Princeton, NJ
- July 2018 - **Machine Learning @ Berkeley**, *Education Officer*, Berkeley, CA
- May 2019
- July 2018 - **Robot Learning Lab Outreach**, *Lead*, Berkeley, CA
- May 2019
- Fall 2018 **Introduction to Machine Learning (CS189/289A)**, *Academic Intern*, Berkeley, CA

## Organizing

- Responsible Computer Vision Workshop at ECCV 2022**
- Responsible Computer Vision Workshop at CVPR 2021**

## Reviewing

- ECCV 2022**
- AIES 2022**
- CVPR 2022**
- International Journal of Computer Vision (IJCV)**
- Responsible Computer Vision Workshop at CVPR 2021**

## Extracurriculars and Outreach

- Fall 2021-present **Q'nnections Mentor** - mentor for LGBTQ+ students at Princeton
- Fall 2019 - present **Out in Tech Mentor** - mentor for LGBTQ+ youth ages 17-24 interested in technology
- Fall 2020 - present **Bias in AI Reading Group Organizer** - organize biweekly reading group centered on topics of bias and fairness in machine learning at Princeton University

Fall 2020 - **RISE (Research Inclusion Social Event)** - co-organize monthly social event with discussions centered  
Spring 2022 around diversity and inclusion issues in computer science  
Fall 2020 **JuST (Technology for a Just Society)** - moderate anti-racist reading group discussions  
Fall 2019 - **Society of Women Engineers** - mentor for undergraduates  
Spring 2020  
present **Juggling** - favorite patterns: Jim's 3 count, Madness Mildness, Factory