

JANE CASTLEMAN

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Github ◊ LinkedIn

EDUCATION

Princeton University

M.S. in Computer Science

May 2026 (expected)

Princeton University

B.S.E. in Computer Science (*magna cum laude*)

GPA: 3.9/4.0

Minors in Statistics & Machine Learning, Technology Policy.

May 2024

RESEARCH INTERESTS

My research lies at the intersection of artificial intelligence, human-computer interaction, and technology policy. I work to investigate the adverse impacts of automated systems on user agency and power using algorithmic audits to improve policies for users, developers, and regulators. As these systems become increasingly pervasive and concentrate power, my work seeks to ensure that their deployment aligns with ethical standards and promotes fairness.

RESEARCH & WORK EXPERIENCE

Measuring the Effectiveness of Ad Controls and Explanations in AI-Mediated Ad Targeting System [1]

Aug 2023 - Present

Supervisors: Professor Aleksandra Korolova

Princeton

- Used a RCT with >200 participants to create a custom dataset of ~8k Facebook ads and ad targeting information
- Found that ad controls are ineffective and ad targeting explanations fail to be actionable due to AI-mediated targeting

Ida B. Wells Just Data Lab

Jun - Aug 2023

Supervisors: Professor Ruha Benjamin

Princeton

- Analyzed employment disparities from >70k rows of BLS data in Python, SQL for formerly incarcerated individuals across 41 occupations
- Quantified monetary losses ranging from \$25k to \$250k based on duration of licensing barriers
- Presented findings in the Reimagining Labor Justice section of the Civics of Technology Conference

Maxwell Integrated Hydrology Lab

Jun - Aug 2022

Supervisors: Professor Reed Maxwell

Princeton

- Reduced predicted error for water table depths from 5.2 m to 2.2 m using XGBoost models with observational Xarray data
- Optimized download and ML training on daily coordinate and pixel-based weather data in the US for 2021-2022
- Presented findings at the American Geophysical Union Fall Meeting

TEACHING EXPERIENCE

COS126: Introduction to Computer Science (Undergraduate TA)

Fall 2023 - Spring 2024

COS226: Data Structures & Algorithms (Tutor)

Fall 2023

MAT201: Linear Algebra (Tutor)

Fall 2022 - Spring 2023

PUBLICATIONS

- [1] **Jane Castleman** and A. Korolova, “Why Am I Still Seeing This: Measuring the Effectiveness of Ad Controls and Explanations in AI-mediated Ad Targeting Systems,” in *7th AAAI Conference on AI, Ethics, and Society*, 2024 (forthcoming).

ACHIEVEMENTS

Outstanding Student Teaching Award, awarded by Princeton Computer Science *Spring 2024*
All-Academic Team, awarded by National Intercollegiate Rugby Association *Fall 2023*

TOOLS/SKILLS

Tools Python (Pandas, Numpy, PyTorch, Tensorflow), Java, SQL, R, C, HTML/CSS
Skills data analysis, probability theory, machine learning, survey development, IRB approval process