JANE CASTLEMAN

Phone: (+1) 610-888-4950 ⋄ Email: janeec@princeton.edu

Homepage: jane2620.github.io/

Github ⋄ LinkedIn

EDUCATION

Princeton University *Aug 2024 - May 2026*
M.S. in Computer Science
GPA: 4.0/4.0
Relevant courses: Theoretical ML; Deep Dive into LLMs [1]; AI, Society, & Education [2]; CS, Law, & Policy.

Princeton University *Aug 2020 - May 2024*
B.S.E. in Computer Science (*magna cum laude*)
GPA: 3.9/4.0
Minors in Statistics & Machine Learning, Technology Policy.

RESEARCH & WORK EXPERIENCE

Center for Information Technology & Policy Aug 2023 - Present
Supervisors: Professor Aleksandra Korolova Princeton

- Measured effectiveness of ad controls & explanations on Facebook, finding they were ineffective, and was accepted for publication at the AAAI/ACM Conference on AI, Ethics, and Society [3] & presented at the CITP Conference
- Currently investigating provable guarantees of fairness and representation in generative AI models
- Balancing concurrent projects centered around the downstream impacts of emerging tech & AI, gaining skills in engineering, project management, & academic/policy writing

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

Ernst & Young, LLC Jun - Aug 2023

- Analyzed successes and failures of ETL data transformation of $> 100M$ instances of client data
- Assisted in strategy to deploy AI tools for front- and back-office functions in financial services
- Earned endorsement for understanding of artificial intelligence fundamentals and ability to apply AI in business problems

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 [4]

PUBLICATIONS & PREPRINTS

[1] **Jane Castleman** and A. Korolova, *Adultification Bias in LLMs and T2I Models*, Under review, 2025.

[2] **Jane Castleman***, N. Nadeem*, T. Namjoshi*, and L. Liu, "Missing the Mark: Rethinking Math Benchmarks for LLMs using IRT," in *AAAI2024 Workshop on AI for Education*, Mar. 2025 (forthcoming).

[3] **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. [Online]. Available: `http://arxiv.org/abs/2408.11910`.

[4] **Jane Castleman**, Y. Ma, A. Defnet, and R. M. Maxwell, "Using XGBoost to Estimate Water Table Depth Over the Contiguous United States using Observational Data.," in *American Geophysical Union*, Dec. 2022. [Online]. Available: `https://agu.confex.com/agu/fm22/meetingapp.cgi/Paper/1175116`.

AWARDS

AIES/NSF Student Travel Award	*Fall 2024*
Outstanding Student Teaching Award (Princeton Computer Science)	*Spring 2024*
School of Engineering & Applied Sciences McIntosh Senior Thesis Funding Award	*Fall 2023*
All-Academic Team (National Intercollegiate Rugby Association)	*Fall 2023*

INVITED TALKS

CITP Conference – Tech Policy: The Next Ten Years	*Fall 2024*

TEACHING EXPERIENCE

COS126: Introduction to Computer Science (Teaching Assistant)	*Spring 2025*
COS350: Ethics of Computing (Teaching Assistant)	*Fall 2024*
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*

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