TIANQI KOU

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EDUCATION

Pennsylvania State University
Ph.D. in Informatics *2020 - present*
Advisor: Dr. Dana Calacci
Title: Toward a Feminist Conception of Replicability for Machine Learning Research
MS in Informatics *2023*
Advisor: Dr. Daniel Susser, Dr. Fred Fonseca
Title: Reconceptualizing Machine Learning Reproducibility

Fordham University *2017 - 2019*
MS in Computer Science
Advisor: Dr. Yijun Zhao
Title: A Quantitative Machine Learning Approach to Master Students Admission for Professional Institutions

Harbin Institute of Technology *2013 - 2017*
BS in Economics

Monash University *2016*
China Scholarship Council exchange student

RESEARCH INTERESTS

Science and Technoloy Studies, Philosophy of Science, AI Ethics

PUBLICATIONS

Tianqi Kou*, Dana Calacci, Cindy Lin. (Under Review) "Dead Zone of Accountability: Why Soical Claims in Machine Learning Research Should be Articulated and Defended." 2025. (*first author)

Tianqi Kou. (Under Review) "How the Human-Computer Interaction Community Can Bring Sociotechnical Reasoning to Machine Learning Replicability." Extended abstracts of the 2025 CHI conference on human factors in computing systems.

Tianqi Kou. "From Model Performance to Claim: How a Change of Focus in Machine Learning Replicability Can Help Bridge the Responsibility Gap." Proceedings of the ACM Conference on Fairness, Accountability, and Transparency (FAccT), 2024.

Tianqi Kou. "The Function of Replicability in Machine Learning Research". Philosophy of Science Meets Machine Learning (PhilML), 2023.

RESEARCH EXPERIENCE

Pennsylvania State University *2020 - present*
Research Assistant

- Design, conduct, and anlyzed semi-structured interviews with K-12 school librarians about their conceptualizations of children's privacy literacy and their roles in strengthening children's privacy literacy; conducted coding of interview data (Advisor: Dr. Priya Kumar, Funded by the College of IST)
- Developed a variant of *Surrogate Scoring Rule* using *Hierarchical Mutual Information* to score crowdsourced expert judgements of study reproducibility without ground truth. (Advisor: Dr. Sarah Rajtmajer, Funded by DARPA)

· Built networks to detect self-disclosure dynamics on Twitter during COVID-19 pandemic using Network Analysis. (Co-advisors: Dr. Sarah Rajtmajer and Dr. Anna Squicciarini, Funded by NSF)

Fordham University *2017 - 2019*
Graduate Research Assistant

· Developed S3VM+ based on S3VM and SVM+, a semi-supervised variant of SVM that takes advantage of privileged information in unlabeled data and subgroup; applied S3VM+ to real-world admission data to predict student performance. (Advisor: Dr. Yijun Zhao, Funded by the Graduate School at Fordham University)

WORK EXPERIENCE

LOGIC(S) *2025 - 2026*
Editorial Fellow

Penn State Graduate Writing Center *2024 -*
Graduate Writing Consultant

LOGIC(S) *2024 - 2025*
Fact Checker and Tech Column Explainer

Apteo *2019 - 2020*
Machine Learning Engineer

· Integrated and deployed explainability features into the pipeline using *Local Interpretable Model-agnostic Explanations (LIME)* and *LightGBM*.

· Validated linear regression function and SVM function by running unit tests.

SERVICES

ACM AI, Ethics, and Society (AIES) *2025*
Reviewer

Big Data & Society *2025*
Reviewer

ACM FAccT *2025*
Reviewer

ACM FAccT *2024*
Author

CHI *2023, 2024*
Reviewer

Institute for Computational and Data Sciences Symposium *2023*
Accepted Poster, Pennsylvania State University

Philosophy of Science Meets Machine Learning *2023*
Invited Speaker, University of Tübingen AI Center

Spilling the Tea Stilling an Ocean: A critical tech workshop series *2023*
Co-organizer, Pennsylvania State University

Institute for Computational and Data Sciences Symposium *2022*
Accepted Poster, Pennsylvania State University

TEACHING EXPERIENCE

Pennsylvania State University *2020 - present*
Teaching Assistant

- IST402 Emerging Issues and Technologies
- DS200 Intro to Data Science
- IST230 Language, Logic, and Discrete Mathematics
- DS310 Machine Learning, Pennsylvania State University

Fordham University *2018 - 2019*
Teaching Assistant

- CICS5800 Machine Learning
- SDGB7844 Statistical Methods and Computation

AWARDS

Digital Life Initiative Postdoctoral Fellowship Shortlist, CornellTech	*2025*
ACM FAccT Travel Scholarship Award	*2024*
Liberatory Tech Scholar Fellowship, THiCC Lab and LOGIC(S) Magazine	*2024*
Dean's Travel Award, Penn State IST	*2024*
Microsoft PhD Research Fellowship Nomination, Penn State IST	*2022*
Graduate Academic Achievement Award, Fordham University	*2019*
Dean's Scholarship, Fordham University	*2017 - 2019*
China Scholarship Council 1st Class Scholarship	*2016*
National People's Scholarship top 5%, Harbin Institute of Technology	*2014, 2015*
First Prize in Mathematical Contest in Modeling, COMAP	*2015*
First Prize in Chinese National Mathematics Competition	*2012*

TECHNICAL SKILLS

Python, R, Scala, JavaScript, HTML