Terrence Neumann

Austin, TX 78746
(269) 370-8123 • tdneuman@gmail.com • terryneumann

About Me

I am a fifth-year PhD candidate researching responsible AI. My work bridges machine learning and computational social science to address pressing challenges at the intersection of AI and society.

Education

University of Texas at Austin — **Austin, TX**
PhD – Information Systems, Ethical AI Emphasis — *Expected 2026*
Thesis: Sociotechnical Controls for Mitigating AI Risk in the Absence of Ground Truth
Advisors: Maria De-Arteaga and Yan Leng

Northwestern University — **Evanston, IL**
MS in Analytics — *December 2016*

Indiana University, Bloomington — **Bloomington, IN**
BA in Economics and Mathematics (*Departmental Honors*) — *May 2015*

Publications

1. Pope-Caldwell, Sarah, Dominik Deffner, Luke Maurits, **Terrence Neumann**, and Daniel Haun. *Variability and harshness shape flexible strategy-use in support of the constrained flexibility framework.* Scientific Reports 14, no. 1 (2024): 7236.
2. **Terrence Neumann** and Nicholas Wolczynski. *Does AI-Assisted Fact-Checking Disproportionately Benefit Majority Groups Online?* Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency (FAccT). 2023.
3. Tanriverdi, Hüseyin, John-Patrick Akinyemi, and **Terrence Neumann**. *Mitigating Bias in Organizational Development and Use of Artificial Intelligence.* Proceedings of the 2023 International Conference on Information Systems. 2023.
4. **Terrence Neumann**, Maria De-Arteaga, and Sina Fazelpour. *Justice in misinformation detection systems: An analysis of algorithms, stakeholders, and potential harms.* Proceedings of the 2022 ACM Conference on Fairness, Accountability, and Transparency (FAccT). 2022.

Working Papers

1. **Terrence Neumann**, Maria De-Arteaga, and Sina Fazelpour. *Should You Use LLMs to Simulate Opinions? Quality Checks for Early-Stage Deliberation.* Under Review at AAAI. **Awarded Runner Up, Best Paper Award, ISS Cluster, INFORMS**. 2025.
2. **Terrence Neumann** and Yan Leng. *From Statistical Patterns Emerge Human-Like Behaviors: How LLMs Learn Social Preferences*. **Accepted at INFORMS Data Science Workshop**. 2025.
3. **Terrence Neumann**, Sooyong Lee, Maria De-Arteaga, Sina Fazelpour, and Matthew Lease. *Diverse, but Divisive. LLMs Can Exaggerate Gender Differences in Opinion Related to Harms of Misinformation. arxiv*. 2024.
4. **Terrence Neumann**, Maria De-Arteaga, Sina Fazelpour, Maytal Saar-Tsechansky, and Matthew Lease. *Informational Justice in AI-Assisted Fact-Checking.* SSRN. 2024.
5. **Terrence Neumann** and Bryan Jones. *PRISM: A Design Framework for Open-Source Foundation Model Safety. arxiv*. 2024.

Awards

Runner Up, *Best Paper Award*, ISS Cluster, INFORMS 2025: Awarded for *Should You Use LLMs to Simulate Opinions? Quality Checks for Early-Stage Deliberation.*

Continuing Excellence Fellowship. 2025-2026: Awarded for continuing dedication to outstanding research in support of a dissertation at the University of Texas at Austin.

Brumley Graduate Fellowship. 2023-2024: Investigating the risks associated with open-sourcing advanced AI technologies, like LLMs.

NYU Policing Project Fellow. 2023-2025: Providing data assistance and thought leadership on "Reimagining Public Safety" project.

Professional & Research Experience

University of Texas at Austin **Austin, TX**

Teaching Assistant *September 2022 - present*

- TA for Introduction to Programming and Problem Solving for four semesters. Graded homework, held well-attended office hours, and proctored exams for three sections, totaling more than 100 students, each semester.
- TA for Applied Ethics of AI class for one semester. Developed innovative programming course materials and held well-attended office hours.

Crime and Education Labs, University of Chicago **Chicago, IL**

Data Scientist, Senior Data Scientist *Jan 2017 – June 2021*

- Led the technical front of applied data science efforts with the Chicago Police Department. Developed novel crime fighting applications that were adopted by analysts department wide.
- Built and deployed person-based predictive models to identify at-risk individuals targeted with additional social services, especially related to domestic violence and education dropout.
- Developed novel causal inference technique (`ElasticSynth`) to determine effect of change in policing management on crime levels in Chicago.

Technical Skills

Programming Languages & ML Frameworks: Python, R, PyTorch, scikit-learn, LangChain, MCP

Large Language Models: Fine-tuning, In-Context Learning, Knowledge Injection, Prompt Engineering

LLM Safety & Evaluation: Sparse auto-encoders, Statistical approaches to LLM evaluation

Causal Inference: Hypothesis Testing, Matching, Synthetic Controls, Bootstrapping, Permutation Tests

Conference Presentations

Wharton AI & the Future of Work Conference: 2025

Conference on Information Systems and Technology (CIST): 2024

INFORMS Annual Meeting and Data Science Workshop: 2024, 2025

ACM Conference of Fairness Accountability and Transparency (FAccT): 2022, 2023

Service

ACM WWW (The Web Conference): 2025 - Reviewer

AAAI/ACM Conference on AI, Ethics, and Society: 2024, 2025 - Program Committee

Conference on Information Systems and Technologies (CIST): 2024, 2025 - Program Committee

INFORMS Data Science Workshop: 2024, 2025 - Program Committee