

Debarati Das

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Summary

I study how people collaborate with AI systems, and what those AI systems miss about human knowledge and context. My research combines NLP, behavioral science, and human-centered evaluation to build measures, datasets, and user simulations that align LLMs and agents with people's goals, situations, and decisions.

Experience

INDUSTRY RESEARCH

Microsoft — SENIOR APPLIED SCIENTIST

Aug 2025 – Present

- Measuring how people delegate, oversee, and recover from AI agents, and turning those signals into product metrics.

GRADUATE RESEARCH

Office of Applied Research, Microsoft, Redmond — RESEARCHER

Sep 2024 – Jul 2025

- Designed and ran a mixed-methods diary study of 92 professionals and 295 real work emails, tracing writers' situational context, what reached the AI and how writers repaired AI assisted drafts. This work motivates personalization systems that ask for missing context. Featured in the [New Future of Work Reader](#).

Microsoft Research, Redmond — RESEARCH INTERN

Jun 2024 – Sep 2024

- Developed a RAG-assisted answer drafting tool for Enterprise QA systems. Conducted a think-aloud user study to qualitatively understand knowledge-seeking behavior on community QA forums.

Minnesota NLP Lab — RESEARCH ASSISTANT

Jun 2021 – Jul 2025

- Built LawFlow, an expert *dataset and benchmark* showing lawyers plan non-linearly while LLMs draft linearly (COLM '25).
- Conducted rigorous analysis to identify *biases and artifacts from LLM-generated synthetic data*.
- Leveraged *LLMs for graph reasoning* tasks (node classification) to enhance prediction accuracy and efficiency.
- Explored training data distribution balancing for *multi-style text transfer* using a T5-based joint style analysis and generation pipeline.
- Developed a fine-grained dataset of conflicting societal values and preferences for *Human-LLM alignment*.

Minnesota Computational Advertising Laboratory — RESEARCH ASSISTANT

Jul 2019 – Dec 2023

- Developed a BERT-based *political ideology classifier* incorporating textual and behavioral user features.
- Built AdBERT, a *few-shot learning framework* to align tweets with Super Bowl TV advertisements.
- Implemented *latent attribute detection* for gender, location, and age, and BERT-based classifiers for sentiment and emotion.

3M — NLP RESEARCH INTERN

May 2020 – Aug 2020

- Developed a *Neural Extractive Summarization* pipeline from MIMIC-III ICU data using BERT; evaluated query embeddings for clinical text summarization.

3M — RESEARCH & DEV INTERN

May 2019 – Aug 2019

- Explored *Bayesian Neural Nets for large-scale time series*; implemented Variational Inference and Dropout-based Bayesian approximation for uncertainty quantification.

UNDERGRADUATE RESEARCH

Undergraduate research at IIT, IISc, and Microsoft Research India (2015–2017) spanned network science and applied ML. I modeled and steered meme propagation in social networks (Complex Networks 2016; SNAM 2018), classified protein-protein interfaces to support drug design, and built a cloud pipeline for real-time driver-safety prediction from smartphone and vehicle sensors.

Education

University of Minnesota Twin Cities

Minneapolis, MN

PH.D. IN COMPUTER SCIENCE

August 2019 – Feb 2026

- **Thesis:** LLMs as Sociotechnical Actors: A Scaffolding Framework for Recovering Context Lost in Text-Only Settings. [\[Link\]](#)
- **Committee:** Jisu Huh, Stevie Chancellor, Dongyeop Kang and Jaideep Srivastava

University of Minnesota Twin Cities

Minneapolis, MN

M.S. IN COMPUTER SCIENCE

August 2017 – August 2019

Selected Publications

COMPUTER SCIENCE PAPERS

- Babysitting AI Agents: A User-Centered Taxonomy and Study of Agentic Delegation** *CHI 2027 [Under Submission]*
 - **Failures**
S. Mittal, S. Kim, S. Counts, J. Neville, **D. Das*** and P. Laban*
- COGENT: a modular cognitive architecture for agentic user simulation** *USERSIM @ NeurIPS [Accepted]*
 - Y. Chi, A. Davies, **D. Das**, L. Ai and S. Counts
- Not Just My Style: Toward Contextual Personalization in AI-Assisted Workplace** *TIIS [Under Submission]*
 - **Communication**
D. Das, S. Mysore, C. St.Hill, D. Kang and B. Sarrafzadeh
- Prototypical Human-AI Collaboration Behaviors from LLM-Assisted Writing in the Wild** *EMNLP 2025 [Paper Link]*
 - S. Mysore, **D. Das**, H. Cao and B. Sarrafzadeh
- LawFlow: Collecting and Simulating Lawyers' Thought Processes** *COLM 2025 [Paper Link]*
 - **D. Das**, K. Le*, R. Parkar*, K. Langis, B. Madson, C. Berryman, R. Willis, D. Moses, B. McDonnell, D. Schwarcz, and D. Kang
- Under the Surface: Tracking the Artifactuality of LLM-Generated Data** *TACL [Under Review]*
 - **D. Das**, K. Langis, A. Martin, J. Kim, M. Lee, Z. Kim, S. Hayati, R. Owan, B. Hu, R. Parkar, R. Koo, J. Park, A. Tyagi, L. Ferland, S. Roy, V. Liu and D. Kang
- Which Modality should I use - Text, Motif, or Image? Understanding Graphs with Large** *NAACL 2024 [Paper Link]*
 - **Language Models**
D. Das, I. Gupta, J. Srivastava and D. Kang

APPLICATION PAPERS

- Thinking Like A Lawyer In The Age Of Generative AI: Cognitive Limits On AI** *Journal of Institutional and Theoretical Economics [Paper Link]*
 - **Adoption Among Lawyers**
D. Schwarcz, **D. Das**, D. Kang and B. McDonnell
- Publics' Perceptions of Legitimacy in Corporate Social Advocacy: A Computational** *Public Relations Review [Paper Link]*
 - **Analysis of the Influence of Ideological Congruence**
H. Xu, **D. Das**, J. Huh, H. Rim and J. Srivastava
- Influence of Consumers' Temporary Affect on Ad Engagement: A Computational** *Journal of Advertising [Paper Link]*
 - **Research Approach**
X. Lu, **D. Das**, J. Huh and J. Srivastava

Patents

- 2025 **Filed**, Pre-emptively Tailoring Copilots through Users Historical Task Aligning Behaviors
- 2026 **Filed**, A Sociotechnical Control Layer for Context-Aware Large Language Model Interaction.
- 2026 **In Progress**, Cogent: System and Method for Configurable User Simulation through a Modular Cognitive Architecture

Awards & Highlights

- 2025 **Recipient**, EMNLP Senior Area Chair Highlight Award
- 2024 **Recipient**, AnitaB.org Advancing Inclusion Scholarship
- 2019 **Recipient**, Computing Research Association-Women (CRA-W) scholarship
- 2016 **Recipient**, National Network for Mathematical & Computational Biology Research Fellowship
- 2015 **Recipient**, Indian Academy of Sciences Research Fellowship

Presentations and Talks

- Microsoft, Redmond** *Mar 2025*
LLMs as Sensors and Subjects: Expanding Human-AI Collaboration in Socio-Technical Systems
- Sparkway Learning PythonAI Workshop 2024** *Dec 2024*
When AI Learns to Listen: Generative AI in the Social Sciences

Women in AI and Data Science (WiADS) 2024

LLM-Generated Artifacts and their Impact on the AI Ecosystem

Nov 2024

10th International Conference on Computational Social Science (IC2S2 2024)

Beyond Words: Incorporating Graph Data into LLMs for Comprehensive Social System Analysis

Jul 2024

Megagon Labs

Under the Surface: Tracking the Artifactuality of LLM-Generated Data

May 2024

Hubbard School of Journalism (JOUR8500), UMN Twin Cities

Computational Techniques Used to Analyze Political Ideologies and Sentiments in Social Media Data

May 2023

Academic Service

- **Program/Scientific Committee:** COLING 2025; LREC 2026.
- **Conference Reviewer** (2022 – present): CHI, ACL Rolling Review (ACL, EMNLP, NAACL), COLING, LREC, IC2S2; workshops at NeurIPS, EMNLP, and ACL.
- **Journal Reviewer:** Nature Humanities & Social Sciences Communications, ACM TKDD, IEEE TVCG, Journal of Marketing Communications.

Teaching & Mentorship

TEACHING

Courses (University of Minnesota Twin Cities)

- 2023** **Instructor**, CSE TALK Program (trained incoming graduate teaching assistants)
- 2023** **Teaching Assistant**, Natural Language Processing (course material, mentored projects, organized research posters)
- 2018–24** **Teaching Assistant**, Practice of Database Systems (7 terms, course development and delivered lectures)
- 2018–23** **Teaching Assistant**, Intro Algorithms & Data Structures / Program Development (4 terms, grading and course material development)

MENTORSHIP

Community leadership

- 2027** **Organizer**, AI Future of Work workshop at CHIWORK (speakers across NLP, HCI, and economics)
- 2021–23** **Co-organizer**, Minnesota NLP Seminar
- 2020–25** **Member**, CS-IDEA Diversity, Equity, and Advocacy Committee
- 2020–22** **Officer**, CS Graduate Students Association
- 2019–22** **Coordinator**, Women in Computer Science (peer support and industry networking for women and non-binary graduate students)

Mentees (17; grouped by start year; → = next position)

- 2026** Yikun Chi (PhD, Stanford); Shravika Mittal (PhD, Georgia Tech)
- 2024** Khanh Chi Le (UG → PhD, UMN); Ritik Parkar (MS → Thomson Reuters); Jianing Wen (MS → PhD, Northeastern); Amrutha Shetty (MS → Malec Engineering)
- 2023** Sanjali Roy (UG); Ishaan Gupta (UG → Seagate intern)
- 2021** David Ma (MS → Optiver); Josh Spitzer-Resnick (MS → Solventum); Haoyu Gong (PhD); Aadesh Salecha (UG → Stanford); Aryan Srivastava (High school → Purdue)
- 2020** Roopana Chenchu (MS → Google); Mayura Nene (MS → Amazon); Ahmed Hassan (UG); Hao Zou (UG)