jmilbaue@andrew.cmu.edu — jeremiah.milbauer.info

I conduct research on the **epistemic role of artificial intelligence**, investigating and building intelligent systems that enhance our ability to explore and connect ideas across scholarly and sociocultural contexts.

#### Research areas

Natural Language Processing (NLP), Computational Social Science (CSS), Human-Computer Interaction (HCI). Specifically, Human-AI interaction, Sensemaking, Science of Science, Information Retrieval, Accelerating Science, Scholarly NLP, Cultural Analytics

#### Education

## Carnegie Mellon University, School of Computer Science

Ph.D. and M.S., Language Technologies Institute Advisor: Emma Strubell 2020 - present

## University of Chicago

B.S. Computer Science (hons.) and B.A. Philosophy

2019

### **Hunter College High School**

Selective public school in New York City.

2015

# Peer-reviewed publications

HCI Sireesh Gururaja, Nupoor Gandhi, Jeremiah Milbauer, Emma Strubell. "Beyond Text: Domain Expert Needs in Document Research." Association for Computational Linguistics (Findings), 2025.

NLP HCI = Anjali Kantharuban, = Jeremiah Milbauer, Emma Strubell, Graham Neubig. "Stereotype or Personalization? User Identity Biases Chatbot Recommendations." Association for Computational Linguistics (Findings), 2025.

HCI NLP Tongshuang Wu, Haiyi Zhu, ..., Jeremiah Milbauer, .... "LLMs as Workers in Human-Computational Algorithms? Replicating Crowdsourcing Pipelines with LLMs." ACM CHI Conference on Human Factors in Computing Systems (Case Study), 2025.

NLP HCI Jeremiah Milbauer, Ziqi Ding, Zhijin Wu, Tongshuang Wu. "NewsSense: Reference-free Verification via Cross-document Comparison." *Empirical Methods in Natural Language Processing* (Demo), 2023.

NLP **Jeremiah Milbauer**, Annie Louis, M. Javad Hosseini, Alex Fabrikant, Don Metzler, Tal Schuster. "LAIT: Efficient Multi-segment Encoding in Transformers with Layer-adjustable Interaction." Association for Computational Linguistics, 2023.

NLP CSS Jeremiah Milbauer, Adarsh Mathew, James Evans. "Aligning Multidimensional Worldviews and Discovering Ideological Differences." *Empirical Methods in Natural Language Processing*, 2021

### **Preprints**

NLP Long Phan, ..., **Jeremiah Milbauer**, ..., Dan Hendrycks. "Humanity's Last Exam" 2025. (contributed questions on model induction, gestalt perception, and law)

### **Invited Talks**

NLP HCI "User Identity Biases Chatbot Recommendations." 3rd Workshop on Social Influence in Conversations at ACL 2025.

# Posters & Presentations

NLP Sireesh Gururaja, **Jeremiah Milbauer**, Hung-Yi Lin, Anthony Rollett, Emma Strubell "Data Driven Design as a Challenge Task for Few- and Zero-Shot Information Extraction" *AI and Scientific Discovery: Directions and Opportunities @ NAACL*, 2025

NLP CSS Jeremiah Milbauer, Emma Strubell. "Inside the Echo Chamber: Leveraging Language Models to Measure Community Consensus" *TADA 2023: New Directions in Analyzing Text as Data*, 2023.

CSS Adarsh Mathew, **Jeremiah Milbauer**, James Evans. "Paths to Power: Networked Influence and Contribution on Reddit." *INDE 2021: Beyond Misinformation*, 2021.

CSS Jeremiah Milbauer, Yutao Chen, Deblina Mukherjee, James Evans. "Representing Repositories in the Open-source Ecosystem." *IC2S2: International Conference on Computational Social Science*, 2021.

### Other Writing

Jeremiah Milbauer. "Green Homesteads." Open Future Essay Contest (Shortlist), The Economist, 2019.

Press: The Economist

**Jeremiah Milbauer.** "Opting Out: Ignorance, not Consent." Chapter in *Student Privacy: The Next Frontier*. Berkman Center Research Publications, 2015.

Awards &
Fellowships

Finalist, 3 Minute Thesis	2024
Knight Fellowship	2023 - 2024
CMU Research Fellowship	2020 - present
Open Future Essay Shortlist (top 6 of 2300+)	2019
Graduation Speaker, University of Chicago	2019
National Merit Scholarship	2015

# Research Experience

Mozilla.ai, Builder in Residence, Research Agents	2025 - present
Carnegie Mellon University, Graduate Research Assistant	2020 - present
Google Research, Student Researcher, LLMs	2023
Google Research, Student Researcher, Reasoning	2022
Knowledge Lab, Research Fellow with James Evans	2020 - 2022
University of Chicago, Research Assistant to John Goldsmith	2019
University of Chicago, Research Assistant to Ben Y. Zhao	2017 - 2018
University of Chicago, Research Assistant to John Lafferty	summer 2016
Berkman Center, Harvard University, Research Assistant Intern	summer $2015$

# Other Work Experience

Performer, Teacher, Tour Guide, UChicago Carillon Guild	2016 - 2019
Simmer (f.k.a. "Foodie"), Machine Learning Lead	2019
Google X, Software Engineer Intern	summer 2018
Area 1 Security, Software Engineer Intern	summer $2017$
Vision Education & Media, Teaching kids to code	summers $2010$ , $2013$

### **Teaching**

Computational Ethics in NLP, Carnegie Mellon University

2023

# Mentorship

Milen Tesfaye (CS, Carnegie Mellon University)	2024 - present
Conrad Schaumburg (AI, Carnegie Mellon University)	2023 - 2024
Deblina Mukherjee (Statistics, University of Chicago)	2020

Service &	Vision Committee, Language Technologies Institute		
Leadership	Education Committee, Language Technologies Institute		
	Dean's Advisory Committee, Chair, CMU School of Computer Science		

2022 - 2023 2020 - 2022

2024 - 2025

Empirical Methods in Natural Language Processing, Reviewer 2023, 2024\*
Association for Computational Linguistics, Reviewer 2023
ACL Rolling Review, Reviewer 2025x2
International Conference for Computational Social Science, Reviewer 2022, 2023

\* Outstanding Reviewer

### Skills & interests

**Programming:** Python, Haskell, Java, C++, C, PyTorch, sklearn, Hugging Face, Jax, SQL, slurm, bash, git, LaTeX, etc.

Other interests: Education, technology law & policy, creative coding, philosophy of language, philosophy of mind, history of the Internet, social choice theory, ethical use of technology, library science, electronic music, piano, carillon, baking, crafting, dancing, architecture.