Jacob Trauger

https://traugerjacob.github.io/

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Python / R / Java / C++ / C / Hadoop / Spark / SQL / Haskell / LaTeX / Linux

Education

08/21 – 05/26 **Ph.D., University of Michigan**: *Statistics*
Rising 5th year Ph.D. candidate working under Ambuj Tewari on the theory of deep learning.

08/16 – 05/20 **B.S., University of Illinois Urbana-Champaign**: *Statistics and Computer Science, Mathematics*
Graduated Cum Laude with Highest Distinction in both majors. GPA: 3.88.

Research Publications

1. **J. Trauger** and A. Tewari, "On next-token prediction in llms: How end goals determine the consistency of decoding algorithms," *arXiv preprint arXiv:2505.11183*, 2025.
2. **J. Trauger** and A. Tewari, "Sequence length independent norm-based generalization bounds for transformers," in *International Conference on Artificial Intelligence and Statistics*, PMLR, 2024, pp. 1405–1413.
3. K. M. Ikegwu, **J. Trauger**, J. McMullin, and R. J. Brunner, "Pyif: A fast and light weight implementation to estimate bivariate transfer entropy for big data," in *2020 SoutheastCon*, IEEE, 2020, pp. 1–6.

Employment History

2020 – 2021 **Data Science Engineer**: *SimSpace*
Responsibilities included designing and implementing code to support machine learning projects. I also helped in the interview process by designing questions and evaluating candidates for software engineering positions.

2020 **Data Science and Machine Learning Infrastructure Researcher**: *Gies College of Business' Data Science Research Service*
Used Microsoft Azure to support other employees with their computational needs. I also helped with the data science and machine learning needs of Gies College of Business' students, faculty, and staff.

2017-2020 **Researcher**: *Laboratory for Computation, Data, and Machine Learning*
Worked under Professor Robert J. Brunner and his research group. I contributed to data science and machine learning projects for this group and for the National Center for Supercomputing Applications.

Teaching Assistantships

WN25 **STATS 401**: Applied Statistical Methods II

WN23, FA23, WN24, FA24 **STATS 315**: Statistics and Artificial Intelligence
Won honorable mention for best TA team in the department in 2022-2023.

WN22, FA22 **STATS 280**: Honors Introduction to Statistics

FA21 **STATS 250**: Introduction to Statistics

FA17 **CS 199**: Applied Cloud Computing