Hongtao Hao

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Education

University of Wisconsin-Madison — Madison, WI
PhD in Computer Sciences — *June 2026 (Expected)*

Indiana University Bloomington — Bloomington, IN
M.A. in Media Arts and Sciences — *May 2020*

Experiences

Robert Bosch LLC — June 2023 – Aug. 2023
Research Intern — *Sunnyvale, CA*

- Innovated corporate data analysis utilizing LLMs
- Developed a front-end interface & a backend database to allow engineers to interact with LLMs
- Utilized Langchain and OpenAI API to generate and rate automatic responses
- Led to the publication of *Can LLMs Infer Domain Knowledge from Code Exemplars? A Preliminary Study*

YY Lab — Aug. 2020 – May 2021
Data Visualization Research Assistant — *Bloomington, IN*

- Assisted Professor Yong-Yeol ("YY") Ahn with the Covid-19 Trend Visualizations
- Updated the data workflow & improved the website design
- Implemented the delay parameter, play speed parameter, go back parameter, and date range slider
- Project ended up among the *TOP 10 Most Liked notebooks on Observable in 2020*

Selected Publications

- Guo, J., Mohanty, V., **Hao, H.**, Gou, L., & Ren, L. (2024, March). Can LLMs Infer Domain Knowledge from Code Exemplars? A Preliminary Study. In *Companion Proceedings of the 29th International Conference on Intelligent User Interfaces* (pp. 95-100).
- **Hao, H.**, Cui, Y., Wang, Z., & Kim, Y. S. (2022). Thirty-two years of IEEE VIS: Authors, fields of study and citations. *IEEE Transactions on Visualization and Computer Graphics, 29*(1), 1016-1025.
- **Hao, H.** (2024). Selfie-editing among young Chinese women may have little to do with self-objectification. *Current Psychology, 43*(4), 3682-3699.
- Guo, J., Mohanty, V., Piazentin Ono, J. H., **Hao, H.**, Gou, L., & Ren, L. (2024, May). Investigating Interaction Modes and User Agency in Human-LLM Collaboration for Domain-Specific Data Analysis. In *Extended Abstracts of the CHI Conference on Human Factors in Computing Systems* (pp. 1-9).

Selected Projects

Introduction to Event-Based Model (EBM) | *ML for health*

- Explained step by step how EBM help model disease progression

Modeling & Visualizing American Time Usage Survey (ATUS) | *ML & Data Visualization*

- Predict people's time usage with a neural network implemented in TensorFlow.js

Hupyter | *Software*

- Converts Jupyter Notebooks to Hugo posts

Skills

Languages: Python, JavaScript, R, Java, SQL

Frameworks & Libraries: PyTorch, LangChain, Spark, DeepSpeed, FARM (FastAPI, React, & MongoDB), Numpy, Pandas, Scikit-learn, Vega-Altair, D3.js, AWS, Google Cloud