

# Houming Chen

Ph.D. Candidate in Computer Science and Engineering | University of Michigan

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## RESEARCH INTERESTS

Data management, data discovery, data integration and schema matching, ranking robustness, and large language models for data systems.

## EDUCATION

University of Michigan, Ann Arbor

2023 - Present

Ph.D. Candidate in Computer Science and Engineering; Advisor: H. V. Jagadish

University of Michigan, Ann Arbor

2020 - 2023

B.S. in Computer Science; Honors Mathematics

University of Wisconsin-Madison

2019 - 2020

Undergraduate studies in Computer Science, Mathematics, and Statistics

## PUBLICATIONS AND PREPRINTS

1. **Houming Chen**, Zhe Zhang, and H. V. Jagadish. *ConStruM: A Structure-Guided LLM Framework for Context-Aware Schema Matching*. arXiv:2601.20482, 2026.
2. **Houming Chen** and H. V. Jagadish. *The General Stability of Ranking*. arXiv:2607.01546, 2026.
3. **Houming Chen** and H. V. Jagadish. *From Research Questions to Columns: Operationalization-Aware Data Discovery*. arXiv:2608.04536, 2026.
4. Yulin Yu, **Houming Chen**, Daniel M. Romero, and Paramveer S. Dhillon. *Signals in the Noise: Decoding Unexpected Engagement Patterns on Twitter*. Proceedings of the ACM on Human-Computer Interaction 9(7), Article CSCW476, 2025.

## RESEARCH EXPERIENCE

Research Assistant, Database Group, University of Michigan

May 2022 - Present

Advisor: H. V. Jagadish

- **Operationalization-aware data discovery:** Defined and benchmarked the task of mapping research questions to appropriate measurements and database columns.
- **Context-aware schema matching:** Developed ConStruM, a structure-guided framework that selects and organizes query-specific evidence under a context budget using a context tree and similarity hypergraph.
- **Ranking stability:** Generalized exact ranking stability to distance-sensitive measures and developed algorithms for two-dimensional, multidimensional, and quasiconvex settings.

Research Assistant, School of Information, University of Michigan

May 2021 - May 2023

Advisor: Paramveer S. Dhillon

- Contributed data analysis and statistical modeling for computational social science projects, including a study of asymmetric engagement patterns across more than 600,000 tweets.

## TEACHING EXPERIENCE

Graduate Student Instructor, University of Michigan

Fall 2025

EECS 484 Database Management Systems

- Supported student learning through course instruction, office hours, grading, and individualized help with database concepts and assignments.

Instructional Aide and Grader, University of Michigan

2020 - 2022

EECS 545 Machine Learning; SI 671 Data Mining; SIADS 642 Introduction to Deep Learning

- Graded assignments and answered student questions across undergraduate and graduate courses in machine learning, data mining, and deep learning.

## HONORS AND AWARDS

Evelyn O. Bychinsky Award, University of Michigan

2022

James B. Angell Scholar and University Honors, University of Michigan

2020 - 2022

Honorable Mention (13th place), ICPC East Central North America Regional

2021

Silver Medal (8th place), ICPC North Central North America Regional

2019

Dean's List, University of Wisconsin-Madison

2019 - 2020