

Kaiwen Dong

PhD. Candidate
Department of Computer Science and Engineering
University of Notre Dame

Phone: +1(217)607-9853
Email: kdong2@nd.edu
Homepage: <https://barcavin.github.io/>

Education

University of Notre Dame , Notre Dame, IN, US Ph.D. Candidate in Computer Science and Engineering Advisor: Prof. Nitesh V. Chawla (ACM & IEEE & AAAI & AAAS Fellow)	Aug 2021 – June 2025 (Expected)
University of Illinois at Urbana-Champaign , Champaign, IL, US Master of Science in Statistics	Aug 2016 – May 2018
Sichuan University , Chengdu, China Bachelor of Science in Mathematics	Aug 2012 – July 2016

Research Interests and Applications

Graph Learning: enable machines to effectively and efficiently capture complex relationships within real-world data.
Deep Relational Learning: advance representation learning of tabular data, especially for relational databases.
AI applications: develop and deploy AI applications, including enterprise text-to-SQL, transaction categorization, and customer service monitoring.

Professional Experience

Research Scientist Intern Intuit Inc. · Developed a transaction categorization model with relational deep learning for relational databases. Mentors: Dr. Kamalika Das and Dr. Xiang Gao	April 2024 – July 2024
Data Scientist Aunalytics Inc. · Developed and deployed systems converting natural language to SQL (text-to-SQL) at enterprise scale. · Built customer service monitoring systems to improve customer experience and subscription churn rate. Supervisor: Dr. David Cieslak	June 2018 – July 2021
Graduate Research Assistant University of Notre Dame · Worked on robustness and efficiency of graph neural networks for link prediction tasks. Advisor: Prof. Nitesh V. Chawla	August 2022 – Present
Graduate Teaching Assistant University of Notre Dame · CSE 21312 Data Structures: Review assignments, Q&A during office hours, Grade. Professor: Matthew Morrison	August 2021 – December 2021

Publications [\[Google Scholar\]](#)

Selected Peer-Reviewed Publications

[Neurips'24]	Pure Message Passing Can Estimate Common Neighbor for Link Prediction Kaiwen Dong , Zhichun Guo, Nitesh V. Chawla <i>The Conference on Neural Information Processing Systems, 2024</i>
[LoG'22]	FakeEdge: Alleviate Dataset Shift in Link Prediction Kaiwen Dong , Yijun Tian, Zhichun Guo, Yang Yang, Nitesh V. Chawla <i>The Learning on Graphs Conference, 2022</i>
[ECML PKDD'21]	An Optimized NL2SQL System for Enterprise Data Mart Kaiwen Dong , Kai Lu, Xin Xia, David Cieslak, Nitesh V. Chawla <i>The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases, 2021</i>

[AAAI'23] **Heterogeneous Graph Masked Autoencoders**
Yijun Tian, **Kaiwen Dong**, Chunhui Zhang, Chuxu Zhang, Nitesh V. Chawla
The AAAI Conference on Artificial Intelligence, 2023

Preprints and Under Submissions

[KDD'25] **Transaction Categorization in QuickBooks with Relational Deep Learning**
Kaiwen Dong, Xiang Gao, Ayan Acharya, Maria Kissa, Hilaf Hasson, Mauricio Flores, Nitesh V. Chawla, Kamalika Das
Under Submission, 2025

[TKDD] **CORE: Data Augmentation for Link Prediction via Information Bottleneck**
Kaiwen Dong, Zhichun Guo, Nitesh V. Chawla
Under Submission

[TMLR] **You do not have to train Graph Neural Networks at all on text-attributed graphs**
Kaiwen Dong, Zhichun Guo, Nitesh V. Chawla
Under Submission, 2025

[TMLR] **Universal Link Predictor By In-Context Learning on Graphs**
Kaiwen Dong, Haitao Mao, Zhichun Guo, Nitesh V. Chawla
Under Submission, 2025

[ICLR'25] **Node Duplication Improves Cold-start Link Prediction**
Zhichun Guo, Tong Zhao, Yozen Liu, **Kaiwen Dong**, William Shiao, Mingxuan Ju, Neil Shah, Nitesh V. Chawla
Under Submission, 2025

[AAAI'25] **MolX: Enhancing Large Language Models for Molecular Learning with A Multi-Modal Extension**
Le Huy Khiem, Zhichun Guo, **Kaiwen Dong**, Xiaobao Huang, Bozhao Nan, Roshni Iyer, Xiangliang Zhang, Olaf Wiest, Wei Wang, Nitesh V. Chawla
Under Submission, 2025

Professional Services

Conference Reviewer

International Conference on Learning Representations (ICLR)	2025
International Conference on Machine Learning (ICML)	2025
Neural Information Processing Systems (NeurIPS)	2024
SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)	2025, 2024
Conference on Information and Knowledge Management (CIKM)	2024
International Conference on Artificial Intelligence and Statistics (AISTATS)	2025

Journal Invited Reviewer

ACM Transactions on Knowledge Discovery from Data (TKDD)	2023
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Last updated on Dec. 29, 2024