TING-WEI LI

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Champaign, IL
Github **Google Scholar** **Linkedin**

I am interested in **data-centric machine learning**. I work on the full data pipeline for modern AI systems, currently focusing on *data attribution*, *data selection*, *data refinement*, and *data generation* for LLMs and agentic systems. I have authored 15+ papers at top venues including ICML/NeurIPS/ICLR, with 300+ citations.

EDUCATION

- **University of Illinois Urbana-Champaign** — Champaign, IL
  Ph.D. in Computer Science — 08/2024 - Present
  Advisor: Prof. Hanghang Tong
  GPA: 4.0/4.0; Expected graduation: 12/2028
- **University of Michigan, Ann Arbor** — Ann Arbor, MI
  M.Sc. in Electrical and Computer Engineering — 08/2021 - 04/2023
  GPA: 4.0/4.0
- **National Taiwan University** — Taipei, Taiwan
  B.S.Eng in Electrical Engineering — 09/2016 - 06/2020
  GPA: 3.9/4.3

EXPERIENCE

- **Meta Platforms, Inc.**
  Part-Time Student Researcher @Ads — 08/2026 - Present, Remote, IL
  - Developed efficient data selection methods tailored for large-scale Ads recommendation models.
  - Mentors: Amit Anand Amlesahwaram, Bill Huang

  Research Intern @Ads — 05/2026 - 08/2026, Sunnyvale, CA
  - Developed gradient-based data attribution methods tailored for large-scale Ads recommendation models.
  - Mentors: Amit Anand Amlesahwaram, Bill Huang
- **Amazon.com, Inc.**
  Applied Scientist Intern @Prime Video — 05/2025 - 08/2025, Seattle, WA
  - Designed an efficient multi-task learning framework for a large-scale video platform.
  - Mentors: Cody Severinski, Changhe Yuan
- **AT&T Inc.**
  Research Intern @AT&T Labs — 09/2023 - 11/2023, Bedminster, NJ
  - Developed interpretable graph-based models for large-scale customer behavior analysis.
  - Mentors: Qiong Wu, Zhengyi Zhou, Eric Zavesky

SELECTED PUBLICATIONS

1. **Ting-Wei Li**, Yuanchen Bei, Xiao Lin, Hanghang Tong. *"Beyond LLM-Based Reasoning: Lightweight GNNs for Agent Failure Attribution"*. In **Conference on Neural Information Processing Systems (NeurIPS)** 2026. [Paper].
2. **Ting-Wei Li**, Sirui Chen, Jiaru Zou, Yingbing Huang, Tianxin Wei, Jingrui He, Hanghang Tong. *"EvoSelect: Data-Efficient LLM Evolution for Targeted Task Adaptation"*. In **Conference on Language Modeling (COLM)** 2026. [Paper].
3. Xinrui He, **Ting-Wei Li**, Tianxin Wei, Xuying Ning, Xinyu He, Wenxuan Bao, Hanghang Tong, Jingrui He. *"Fedecider: An llm-based framework for federated cross-domain recommendation"*. In **Proceedings of the ACM Web Conference (WWW)** 2026. [Paper].

4. Junwei Deng*, Yuzheng Hu*, Pingbang Hu*, **Ting-Wei Li***, Shixuan Liu* et al. *"A Survey of Data Attribution: Methods, Applications, and Evaluation in the Era of Generative AI"*. In **Journal of Artificial Intelligence Research (JAIR)** 2025. [Paper].
5. Tianxin Wei*, **Ting-Wei Li***, Zhining Liu* et al. *"A Survey of Agentic Reasoning for Large Language Models: Towards Recursively Self-Improving and Collective Agents"*. In **Transactions on Machine Learning Research (TMLR)** 2026 **(Hugging Face Weekly #1 Paper)**. [Paper].
6. Xuying Ning, Dongqi Fu, Tianxin Wei, Mengting Ai, Jiaru Zou, **Ting-Wei Li**, Hanghang Tong, Yada Zhu, Hendrik Hamann, Jingrui He. *"MC-Search: Evaluating and Enhancing Multimodal Agentic Search with Structured Long Reasoning Chains"*. In **International Conference on Learning Representations (ICLR)** 2026 **Oral**. [Paper].
7. Ruizhong Qiu*, **Ting-Wei Li***, Gaotang Li, Hanghang Tong. *"Graph Homophily Booster: Rethinking the Role of Discrete Features on Heterophilic Graphs"*. In **International Conference on Learning Representations (ICLR)** 2026. [Paper].
8. Hyunsik Yoo, **Ting-Wei Li**, SeongKu Kang, Zhining Liu, Charlie Xu, Qilin Qi, Hanghang Tong. *"Continual Low-Rank Adapters for LLM-based Generative Recommender Systems"*. In **International Conference on Learning Representations (ICLR)** 2026. [Paper].
9. **Ting-Wei Li**, Ruizhong Qiu, Hanghang Tong. *"Graph Data Selection for Domain Adaptation: A Model-Free Approach"*. In **Conference on Neural Information Processing Systems (NeurIPS)** 2025. [Paper] [Poster].
10. Junwei Deng*, **Ting-Wei Li***, Shiyuan Zhang, Shixuan Liu, Yijun Pan, Hao Huang, Xinhe Wang, Pingbang Hu, Xingjian Zhang, Jiaqi W Ma. *"dattri: A Library for Efficient Data Attribution"*. In **Conference on Neural Information Processing Systems (NeurIPS)** 2024 **Spotlight**. [Paper] [Code] [Poster].
11. Junwei Deng*, **Ting-Wei Li***, Shichang Zhang, Jiaqi Ma. *"Efficient Ensembles Improve Training Data Attribution"*. In **Transactions on Machine Learning Research (TMLR)** 2024. [Paper].
12. **Ting-Wei Li**, Qiaozhu Mei, Jiaqi Ma. *"A Metadata-Driven Approach to Understand Graph Neural Networks"*. In **Conference on Neural Information Processing Systems (NeurIPS)** 2023. [Paper] [Code] [Poster].

(* indicates equal contribution)

PREPRINTS AND SUBMISSIONS

1. **Ting-Wei Li**, Ernie Chang, Yuanchen Bei, Narine Kokhlikyan, Hanghang Tong. *"HyperBridge: Effectively Adapting Hypernetworks across LLM Architectures"*. In **Arxiv** 2026 **(In submission to ICLR)**.
2. Xuying Ning, Katherine Tieu, Dongqi Fu, Tianxin Wei, Zihao Li, Yuanchen Bei, Jiaru Zou, Mengting Ai, Zhining Liu, **Ting-Wei Li** et al. *"Code as Agent Harness: Toward Executable, Verifiable, and Stateful Agent Systems"*. In **Arxiv** 2026 **(Hugging Face Weekly #1 Paper)**. [Paper].
3. Xinrui He, **Ting-Wei Li**, Junting Wang, Mengting Ai, Xinyu He, Hanghang Tong, Jingrui He. *"Harnessing Image Question Dependence for Better VLM Test-time Reinforcement Learning"*. In **Arxiv** 2026 **(In submission to ICLR)**. [Paper].
4. Ruizhong Qiu*, **Ting-Wei Li***, Gaotang Li*, Tianxin Wei, Jingrui He, Hanghang Tong. *"Efficient Inference Scaling for Safety Assurance"*. In **Arxiv** 2025. [Paper].

(* indicates equal contribution)

SKILLS

- **Programming**: Python, C++, Bash
- **ML & LLM Frameworks**: PyTorch, Hugging Face, vLLM, TRL, verl, PEFT
- **AI-Native Development**: Claude Code, Claude CLI, Cursor

SELECTED AWARDS & HONORS

- **Scholar Award**, Conference on Neural Information Processing Systems 2023
- **Graduate Student Research Assistant Tuition Waiver**, University of Michigan 2023

TALKS

- **Agentic Reasoning for Large Language Models**, NLP Academic Exchange Platform 2026
- **Data Attribution for GenAI Copyright**, Data Attribution Reading Group 2024

PROFESSIONAL SERVICES

- **Conference Reviewer**
  - ACM Web Conference (WWW) 2027
  - IEEE/CVF International Conference on Computer Vision (ICCV) 2025
  - Conference on Neural Information Processing Systems (NeurIPS) 2025, 2026
  - International Conference on Learning Representations (ICLR) 2025, 2026, 2027
  - International Conference on Machine Learning (ICML) 2024, 2025, 2026
  - IEEE International Conference on Big Data (Big Data) 2023
  - IEEE International Conference on Data Mining Workshop on Machine Learning on Graphs (ICDM MLoG) 2023
- **Program Committee**
  - AAAI Conference on Artificial Intelligence (AAAI) 2025, 2026, 2027
  - IEEE International Conference on Data Science and Advanced Analytics (DSAA) 2024
- **Organizer Team**
  - Data Foundations of AI Seminar Coordinator
  - Data Attribution Reading Group Speaker, Organization Member

MENTORING EXPERIENCE

- **Mr. Wei-Chi Wu (Exchange B.S. Student, UIUC CS)** 2026 - Now
  - Hypernetworks for non-text data and domain adaptation.
- **Ms. Thota Hima (B.S. Student, UIUC CS)** 2026 - Now
  - Evolving semantic tokenization for LLM-based continual recommendation systems.
- **Ms. Jianing Li (B.S. Student, UIUC CS)** 2025 - 2026
  - Graph-augmented LLM-based recommendation systems.

TEACHING EXPERIENCE

- University of Illinois Urbana-Champaign, **CS 514: Advanced Topics in Network Science** Spring 2027
- University of Illinois Urbana-Champaign, **CS 412: Introduction to Data Mining** Spring 2026