JIATENG LIU

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Google scholar: https://scholar.google.com/citations?user=a5PfQQAAAAJ&hl=zh-CN

RESEARCH INTEREST

Natural Language Processing, Computer Vision, Deep Learning
Multi-modal world knowledge representation learning, Knowledge + LLMs & VLMs, (Multi-modal) LLM agents.

RESEARCH STATEMENT

My research centers on developing adaptable representations of world knowledge to support human-like intelligence and reasoning. I focus on building agentic systems that continually learn from real-world signals, advancing fine-grained multimodal alignment and interaction. A key aspect of my work is knowledge management, ensuring models remain consistent, current, and trustworthy for rigorous, real-world applications where safety is paramount.

EDUCATION

University of Illinois Urbana Champaign *Sep 2025 - Present*
Ph.D in Computer Science *Instructor: Prof. Heng Ji*

University of Illinois Urbana Champaign *August 2023 - May 2025*
Master of Science (M.S.) in Computer Science *Instructor: Prof. Heng Ji*

Zhejiang University *September 2019- June 2023*
Bachelor of Science, Computer Science. *Instructor: Prof. Mingli Song*
Overall GPA: 3.94/4.0

PUBLICATIONS

[1] Analyzing and Internalizing Complex Policy Documents for LLM Agents
Submitted to ICLR 2026
Jiateng Liu, Zhenhailong Wang, Xiaojiang Huang, Yingjie Li, Xing Fan, Chenlei Guo, Ruhi Sarikaya, Heng Ji

[2] Rescorla Wagner Steering Under Mixed and Inappropriate Contexts
Accepted by EMNLP 2025 Main
Rushi Wang*, **Jiateng Liu***, Cheng Qian, Yifan Shen, Yanzhou Pan, Zhaozhuo Xu, Ahmed Abbasi, Heng Ji, Denghui Zhang

[3] ISACL: Internal State Analyzer for Copyrighted Training Data Leakage
Accepted by EMNLP 2025 Findings
Guangwei Zhang, Qisheng Su, **Jiateng Liu**, Cheng Qian, Yanzhou Pan, Yanjie Fu, Denghui Zhang

[4] SYNTHIA: Novel Concept Design with Affordance Composition
Accepted by ACL 2025 Main
Hyeonjeong Ha, Xiaomeng Jin, Jeonghwan Kim, **Jiateng Liu**, Zhenhailong Wang, Khanh Duy Nguyen, Ansel Blume, Nanyun Peng, Kai-Wei Chang, Heng Ji

[5] Knowledge Overshadowing Causes Amalgamated Hallucination in Language Models
Accepted by ACL 2025 Findings
Yuji Zhang, Sha Li, **Jiateng Liu**, Pengfei Yu, Yi R. Fung, Jing Li, Manling Li, Heng Ji

[6] PropaInsight: Toward Deeper Understanding of Propaganda on Techniques, Appeals, and Intents
Accepted by COLING 2025
Jiateng Liu*, Lin Ai, Gary Liu, Hui Zheng, Payam Karisani, May Fung, Preslav Nakov, Julia hirschberg, Heng Ji

[7] Automating Financial Statement Audits with Large Language Models
Accepted by AAAI Workshop 2024
Rushi Wang*, **Jiateng Liu***, Weijie Zhao, Shenglan Li, Denghui Zhang

[8] EVEDIT: Event-based Knowledge Editing with Deductive Editing Boundaries
Accepted by EMNLP 2024
Jiateng Liu*, Pengfei Yu*, Yuji Zhang, Sha Li, Zixuan Zhang, Heng Ji

[9] If LLM Is the Wizard, Then Code Is the Wand: A Survey on How Code Empowers Large Language Models to Serve as Intelligent Agents
Accepted by ICLR 2024 Workshop
Ke Yang*, **Jiateng Liu***, John Wu, Chaoqi Yang, Yi R. Fung, Sha Li, Zixuan Huang, Xu Cao, Xingyao Wang, Yiquan Wang, Heng Ji, Chengxiang Zhai

[10] MINT: Evaluating LLMs in Multi-turn Interaction with Tools and Language Feedback
Accepted by ICLR 2024
Xingyao Wang*, Zihan Wang*, **Jiateng Liu**, Yangyi Chen, Lifan Yuan, Hao Peng, Heng Ji

[11] CurveCloudNet: Processing Point Clouds with 1D Structure
Accepted by CVPR 2024
Colton Stearns, Alex Fu, **Jiateng Liu**, Jeong Joon Park, Davis Rempe, Despoina Paschalidou, Leonidas Guibas

[12] A Language First Approach for Procedure Planning
Accepted by ACL 2023 Findings
Jiateng Liu*, Sha Li*, Zhenhailong Wang, Manling Li, Heng Ji

WORK EXPERIENCE

Applied Scientist Intern at Amazon ***Seattle, WA***
Mentored by: Xiaojiang Huang, Yingjie Li, Xing Fan *August 2023 - December 2023*

- Worked on Internalization of Policy Documents for LLM Agents

Teaching assistant at UIUC ***Champaign,IL***
Siebel School of Computing and Data Science *August 2023 - December 2023*
Advised by: Prof. Margaret M. Fleck

- Teaching CS440 (Artificial Intelligence), designing problem sets, tutoring students.

Research assistant at UIUC ***Champaign,IL***
Siebel School of Computing and Data Science *December 2023 - present*
Advised by: Prof. Heng Ji

- **Project: ECOLE Visual Analytics**
- Design a new video representation for a better understanding of low-level object interactions.
- Designed a novel architecture to process videos and object-level representation.
- Apply tracklets using SAM2 to obtain motion tokens for objects.
- Collect new video instruction tuning datasets for learning actions.
- **Project: Semafor Open Characterization**
- With a focus on real-world propaganda usage, training LLMs to detect misinformation.
- Rooted in established social science works, provide a new framework representing propaganda.
- Design a partially controlled pipeline for generating synthetic data.
- Use Label Studio to manually annotate data, collaborated with Kitware.Inc.

RESEARCH INTERN EXPERIENCE

Summer Internship at Stanford University *August 2022 - December 2022*
3D Reconstruction from Curve Data *Advisors: Prof. Leonidas Guibas and Prof. Yanchao Yang*

- Focused on developing CurveNet, a novel approach for 3D reconstruction leveraging curve data to enhance geometric detail and accuracy in generated models. Collaborated with a team to integrate this technology with existing 3D imaging systems.

Summer Internship at University of Illinois Urbana-Champaign *June 2023 - November 2023*
Research on Large Language Model (LLM) Agents *Advisor: Prof. Heng Ji*

- Conducted research aimed at improving the interpretability and reliability of LLM agents in natural language processing tasks. Participated in the design and testing of model frameworks and contributed to two published papers.

Research Project at Zhejiang University *October 2021 - June 2022*
Multi-Model Representation Learning and Efficient Transformers *Advisor: Prof. Mingli Song*

- Engaged in developing advanced machine learning models that efficiently process and integrate multiple data types. Improved transformer architectures for better performance and lower computational costs

NUS Summer Workshop *June 2021 - September 2021*
Computer Vision: A Visual Detection System *Instructor: Prof. Colin Tan*

- Developed a visual detection system aimed at identifying and categorizing objects in dynamic scenes. Enhanced the accuracy of real-time detection in collaboration with a research team, contributing to a prototype now in pilot testing.

Last updated: Sep, 20th, 2025