Jiatong Li

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Education

University of Science and Technology of China (USTC), China   09/2022 – 06/2025 (expected)

M.Sc., Data Science, Cumulative GPA: 3.17/4.3 (81.22/100)
Supervisor: Prof. Qi Liu
National Scholarship for Graduate Students **(3/286)**

University of Science and Technology of China (USTC), China   09/2018 – 06/2022

B.S., Data Science, Cumulative GPA: 3.90/4.3 (90.71/100)
Coursework: Probability and Mathematical Statistics (99), Discrete Mathematics (88), Multivariate Analysis (93), Introduction to Machine Learning (91), Data Structures (93), An Introduction to Database System (90)

Papers & Publications

- **Jiatong Li**, Renjun Hu, Kunzhe Huang, et al. (2024). PertEval: Unveiling Real Knowledge Capacity of LLMs with Knowledge-Invariant Perturbations. In arxiv. (preprint, **submitted to NeurIPS 2024**)
- **Jiatong Li**[+], Rui Li[+], Qi Liu (2023). Beyond Static Datasets: A Deep Interaction Approach to LLM Evaluation. In arxiv. (preprint)
- **Jiatong Li**, Qi Liu[*], Fei Wang, Jiayu Liu, Zhenya Huang, Fangzhou Yao, Linbo Zhu, Yu Su (2024). Towards the Identifiability and Explainability for Personalized Learner Modeling: An Inductive Paradigm. *In Proceedings of the ACM Web Conference 2024* **(WWW '24)**
- **Jiatong Li**, Fei Wang, Qi Liu, Mengxiao Zhu, Wei Huang, Zhenya Huang[*], Enhong Chen, Yu Su, Shijin Wang (2022). HierCDF: A Bayesian Network-based Hierarchical Cognitive Diagnosis Framework. *In Proceedings of the 28th ACM SIGKDD Conference on Knowledge Discovery and Data Mining* **(KDD '22)**.
- Fangzhou Yao, Qi Liu, Linan Yue, Weibo Gao, **Jiatong Li**, Xin Li, Yuanjing He (2024). AdaD: An Adaptive Response Denoising Framework for Robust Student Modeling. *In Proceedings of the 30th ACM SIGKDD Conference on Knowledge Discovery and Data Mining* **(KDD '24)**. Accepted.
- Junzhe Jiang, Shang Qu, Mingyue Cheng, Qi Liu, Zhiding Liu, Hao Zhang, Rujiao Zhang, Kai Zhang, Rui Li, **Jiatong Li**, Min Gao (2024). Language Modeling for Content-enriched Recommendation. **In DASFAA 2024**. Accepted.

Research Experiences

Reliable Large Language Model Evaluation   2023 – present

Advisor: Prof. Qi Liu, USTC; Dr. Renjun Hu, Alibaba Cloud

- Conducted research on the reliability and trustworthiness of large language model evaluation.
- Proposed a perfect information game-based evaluation methodology for assessing LLMs' problem-solving ability in dynamic scenarios.
- Proposed a novel knowledge perturbation-based evaluation toolkit (PertEval) to unveil LLMs' real knowledge capacity in existing close-ended LLM evaluation benchmarks. The paper is submitted to **NeurIPS 2024 Dataset & Benchmark Track**.
- **Contribution**: proposing idea; conducting experiments, writing papers.

Personalized Learner Modeling in Educational Data Mining   2022 – 2024

Advisor: Prof. Qi Liu, USTC

- Conducted research on cognitive diagnosis-based personalized learner modeling, which aims to efficiently utilize learner behavioral data to mine accurate and explainable learners' cognitive states.
- Proposed a Bayesian network-based hierarchical cognitive diagnosis framework (HierCDF) to model knowledge concept dependency relationships in learner modeling process (**KDD' 22**).

- Proposed an inductive learner modeling framework (ID-CDF) to ensure the identifability and enhance the explainability of learner modeling, which opens new research directiosn in this area (**WWW' 24**).
- **Contribution**: proposing idea; conducting experiments, writing papers.

Professional Experiences

Alibaba Cloud, Hangzhou, China   01/2024 – present

Large Language Model Research Intern, Platform of Artificial Intelligence

- Explore new methodology for better evaluation of LLMs' knowledge acquirement from various aspects.

iFLYTEK, Hefei, China   01/2022 – 06/2022

Big Data Research & Development Engineer Intern

- Explore interpretable personalized learner modeling in intelligent education.

Conference Presentations

- "A Bayesian Hierarchical Item Response Theory Model for Estimating Attributes of Regular Exams and Students' Knowledge Levels" (Oral Presentation). *The International Meeting of the Psychometric Society (IMPS 2023).* University of Maryland, College Park, USA. July 2023.

Other Experiences

University of Science and Technology of China, Hefei, China   02/2022 – 07/2022

Teaching Assistant (TA) in the undergraduate course "Analysis and Practice of the Data".

Alibaba, Shanghai, China   07/2021 – 09/2021

Java Development Intern

- Responsible for the development of the Java backend related to the Alibaba ticketing system.
- Conduct data anlysis on users' behavioral data on the SQL database of the Alibaba ticketing system.
- Implemented the HSF interface of the "Nearby Special" function of the Alibaba ticketing system.

Selected Honors & Awards

National Scholarship for Graduate Students **(3/286)**, China	10/2023
Outstanding Student Scholarship, USTC	2018 – 2021
National 1st Prize in the Contemporary Undergraduate Mathematical Contest in Modeling **(Top 1%)**, China	
Society for Industrial and Applied Mathematics	09/2019

Skills

- Deep Learning Framework: PyTorch, Tensorflow
- Programming Language: Python, Java, C, C++, SQL, LaTeX
- Languages: English - Fluent (**TOEFL: 111 - R: 30, L: 28, S: 25, W: 28**)