

# Zijian Zhang

Ph.D. Candidate

Room A217, Computer Building, Jilin University  
No.2699 Qianjin Street, Changchun, China

+86 157 5431 0579

✉ zhangzj2114@mails.jlu.edu.cn

🏠 Personal Homepage

🌐 LinkedIn Profile

## BIOGRAPHY

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Zijian Zhang is a third-year 'JLU-CityU' joint Ph.D. student under the supervision of Prof. Hongwei Zhao and Prof. Xiangyu Zhao. Before that, he received Masters and Bachelors degrees from Jilin University in 2021 and 2018, respectively. His research interests include Spatio-Temporal Data Mining, Urban Computing, and Recommender Systems.

## EDUCATION

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- School of Data Science, City University of Hong Kong, Joint Ph.D. 2022-Now
- College of Computer Science and Technology, Jilin University, Ph.D. 2021-Now
- College of Computer Science and Technology, Jilin University, M.E. 2018-2021
- College of Computer Science and Technology, Jilin University, B.E. 2014-2018

## PUBLICATIONS

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### •First author (\* indicates equal contribution)

- **Zijian Zhang**, Xiangyu Zhao, Hao Miao, Chunxu Zhang, Hongwei Zhao, Junbo Zhang, AutoSTL: Automated Spatio-Temporal Multi-Task Learning, *The 37th AAAI Conference on Artificial Intelligence, AAAI'2023* [Paper]  
*Summary: We establish a multi-task framework with adaptive spatio-temporal prediction operations optimized by AutoML to solve spatio-temporal multi-task learning.*
- Muyang Li\*, **Zijian Zhang**\*, Xiangyu Zhao, Minghao Zhao, Runze Wu, Ruocheng Guo, AutoMLP: Automated MLP for Sequential Recommendations, *The Web Conference 2023, WWW'2023* [Paper]  
*Summary: We construct an MLP-based framework to tackle sequential recommendation and address long- and short-term interest with AutoML.*
- **Zijian Zhang**, Xiangyu Zhao, Qidong Liu, Chunxu Zhang, Qian Ma, Wanyu Wang, Hongwei Zhao, Yiqi Wang, Zitao Liu, PromptST: Prompt-Enhanced Spatio-Temporal Multi-Attribute Prediction, *The 32nd ACM International Conference on Information and Knowledge Management, CIKM'2023* [Code] [Paper]  
*Summary: We devise an effective and efficient pretrain-prompt training pattern with spatio-temporal transformer and two kinds of prompt tokens for spatio-temporal multi-attribute prediction.*
- Qian Ma\*, **Zijian Zhang**\*, Xiangyu Zhao, Haoliang Li, Hongwei Zhao, Yiqi Wang, Zitao Liu, Wanyu Wang, Rethinking Sensors Modeling: Hierarchical Information Enhanced Traffic Forecasting, *The 32nd ACM International Conference on Information and Knowledge Management, CIKM'2023* [Code] [Paper]  
*Summary: We propose to rethink the modeling of sensor relationships by devising two hierarchical perspectives to incorporate common and representative spatio-temporal patterns.*
- **Zijian Zhang**\*, Ze Huang\*, Zhiwei Hu\*, Xiangyu Zhao, Wanyu Wang, Zitao Liu, Junbo Zhang, S. Joe Qin, Hongwei Zhao, MLPST: MLP is All You Need for Spatio-Temporal Prediction, *The 32nd ACM International Conference on Information and Knowledge Management, CIKM'2023* [Paper]  
*Summary: We build an MLP-based framework with multiple temporal dependencies to solve spatio-temporal prediction with linear computational complexity.*
- Hongwei Zhao(Supervisor), **Zijian Zhang**, Haoyu Zhao, Jiao Li, Huangshui Hu, Qingliang Li, Xing Li, Yuan Zhang, Lili Fan, Pingping Liu, An RFID Anti-collision Algorithm Based on Bidirectional Segmented Query, *CN201911033349.4*, China, **Patent**  
*Summary: We invent an efficient anti-collision algorithm to eliminate vacant slots during RFID query and immensely improve the system throughput rate.*

### •Co-author

- Chunxu Zhang, Ximing Li, Hongbin Pei, **Zijian Zhang**, Bing Liu, Bo Yang, LaenNet: Learning robust GCNs by propagating labels, 2023, *Neural Networks* [JCR Q1]
- Chunxu Zhang, Guodong Long, Tianyi Zhou, Peng Yan, **Zijian Zhang**, Chengqi Zhang, Bo Yang, Dual Personalization on Federated Recommendation, *The 32nd International Joint Conference on Artificial Intelligence, IJCAI'2023*
- Jiahao Liang, Xiangyu Zhao, Muyang Li, **Zijian Zhang**, Haochen Liu, Liu Zitao, MMMLP: Multi-modal Multi-layer Perceptron for Sequence Recommendation, *The Web Conference 2023, WWW'2023*
- Jialin Liu, **Zijian Zhang**, Xiangyu Zhao, Jun Li, Counterfactual-Consistent Adversarial Learning for Recommender Systems, *The 32nd ACM International Conference on Information and Knowledge Management, CIKM'2023*, short paper
- Kesen Zhao, Xiangyu Zhao, **Zijian Zhang**, Muyang Li, Storage-saving Transformer for Sequential Recommendations, *The 31st ACM International Conference on Information and Knowledge Management, CIKM'2022*
- Chunxu Zhang, Ximing Li, **Zijian Zhang**, Jiayu Cui, Bo Yang, BO-Aug: Learning Data Augmentation Policies via Bayesian Optimization, 2022, *Applied Intelligence* [JCR Q2]

## AWARDS AND ACHIEVEMENTS

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- Jilin Bank Wang-Xianghao Scholarship, Jilin University 2023
- First class "QiuShi" scholarship, Jilin University 2023
- Outstanding graduate student, Jilin University 2023
- First class graduate merit scholarship, Jilin University 2023
- Second place in Carbon Neutral Competition track of 3rd Shandong Data Competition 2022
- Outstanding graduating post-graduate student, Jilin University 2021
- Second prize of 'Huawei Cup' The 17th China Post-Graduate Mathematical Contest 2020
- Scholarship of outstanding post-graduate, Jilin University 2019
- Academic performance scholarship of post-graduate, Jilin University 2019
- Third class scholarship, Jilin University 2018
- College excellent student, Jilin University 2018
- First prize in Jilin Province of Contemporary Undergraduate Mathematical Contest 2016

## ACADEMIC EXPERIENCES

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- **Research Intern at Kuaishou** *Sep 2023 - Present*  
*Leader: Dr. Qingpeng Cai*
  - Research on cross-domain and multi-task recommender system
- **Student Physical Fitness Monitoring System based on Smart Bracelet** *Aug 2018 - Nov 2019*  
*Supervisor: Prof. Hongwei Zhao*
  - Design and implement a novel anti-collision algorithm in radio frequency identification system (In-dependently)
  - Design and implement the device information management system in Java (Teamwork)

## TECHNICAL SKILLS AND INTERESTS

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**Languages:** Chinese (native), English (fluent).

**Developer Tools:** Python, Java.

**Soft Skills:** Leadership, Communication, Resilience, and Collaboration.

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