



Jianmin Liu

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BACKGROUND

Jianmin Liu is currently a Ph.D. student at Xi'an Jiaotong University specializing in **Federated Learning** and **Large Language Models**, under the supervision of Associate Prof. **Li Yan**. Prior to this, he obtained a master's degree in Cyberspace Security from Fujian Normal University under the supervision of Prof. **Hui Lin** and Associate Prof. **Xiaoding Wang**, focusing on research related to spatiotemporal traffic data in smart cities. Currently, his research is expecting to promote large language models to a more secure, low-cost and privacy-protected new stage. He possesses a strong sense of initiative and hope to have the opportunity to explore interesting and meaningful things with you.

PUBLICATIONS

Field: Smart City, Trajectory Prediction, **Federated Learning**, **Large Language Models**

- [1] **Jianmin Liu**, Xiaoding Wang, Hui Lin, Feng Yu, "GSAA: A Novel Graph Spatiotemporal Attention Algorithm for Smart City Traffic Prediction". In: *ACM Transactions on Sensor Networks* (2023).
- [2] Jingzhou Ye, Hui Lin, Xiaoding Wang, Chen Dong, **Jianmin Liu**, "Efficient and Reliable Federated Recommendation System in Temporal Scenarios". In: *International Conference on Green, Pervasive, and Cloud Computing*. 2023, pp. 97–107.
- [3] **Jianmin Liu**, Hui Lin, Xiaoding Wang, Lizhao Wu, Sahil Garg, Mohammad Mehedi Hassan, "Reliable trajectory prediction in scene fusion based on spatio-temporal Structure Causal Model". In: *Information Fusion* 102 (2024), p. 102309.
- [4] Xiaoding Wang, **Jianmin Liu**, Hui Lin, Sahil Garg, Mubarak Alrashoud, "A multi-modal spatial-temporal model for accurate motion forecasting with visual fusion". In: *Information Fusion* 102 (2024), p. 102046.
- [5] 刘建敏, 林晖, 汪晓丁, "基于图注意力机制的无地图场景轨迹预测方法". In: *计算机工程* 50.07 (2024), pp. 144–153. ISSN: 1000-3428. DOI: [10.19678/j.issn.1000-3428.0068163](https://doi.org/10.19678/j.issn.1000-3428.0068163).

PATENTS & SOFTWARE COPYRIGHTS

- [1] **Jianmin Liu**. "A chat software based on trusted encryption algorithms". Software Copyright 2020SR1256924 (CN). 2020.
- [2] Xiaoding Wang, Hui Lin, **Jianmin Liu**, Zihang Zhen, Lei Jiang, Chengyu Lin, "A Multimodal Spatiotemporal Model for Accurate Motion Prediction Based on Visual Fusion". Invention Patent CN117315603A (CN). 2024.
- [3] Xiaoding Wang, Hui Lin, Lingjie Zhang, Zihang Zhen, **Jianmin Liu**, Lizhao Wu, "Crowdsourcing Logistics Method Based on Digital Twins and Evolutionary Games". Invention Patent CN117332859A (CN). 2024.
- [4] Xiaoding Wang, Youxiong Que, Hui Lin, Shui Jiang, **Jianmin Liu**, "A federated differential privacy method based on CPS parameter selection technology". Invention Patent CN117574430A (CN). 2024.
- [5] Xiaoding Wang, Youxiong Que, min Zhan, Qibin Wu, **Jianmin Liu**, Hui Lin, "Reliable trajectory prediction based on spatio-temporal Structure Causal Model". Invention Patent CN117933397A (CN). 2024.

AWARDS

Academic Awards:

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|---|---------------|-----------|
| • Excellent Degree Thesis | FJNU | 2024 |
| • Outstanding Student & Excellent Graduates | FJNU | 2023/2024 |
| • Academic Scholarship of FJNU | 1st/2nd Prize | 2023/2022 |
| • National Inspirational Scholarship | | 2020 |

Competition Awards:

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|---|-----------|------|
| • National College Student Information Security Competition Innovation Practice Ability Competition (East and South China regional competition) | 3rd Prize | 2023 |
| • The 12th Cross-Strait Information Service Innovation Competition and the 16th Fujian Province Computer Software Design Competition | 2nd Prize | 2022 |
| • Huawei ICT Competition 2022-2023 Fujian Province Network Track | 3rd Prize | 2022 |

EXPERIENCE

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|---|-----------------|
| • Fujian Normal University <i>Teaching Assistant</i> | 2022.09-2023.06 |
| - Assist in classroom teaching and grading homework for the Computer Network course | |
| • Topsec Technologies Group Inc. <i>Security Operations Engineer</i> | 2022.07-2022.07 |
| - Detect malicious traffic, block it, and trace its source. | |
| • NSFOCUS Co., Ltd. <i>Intern Researcher of Fuying Laboratory</i> | 2023.05-2023.09 |
| - Responsible for the collection of network threat intelligence, vulnerability verification, and the generation of rules. | |

EDUCATION

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| • Xi'an Jiaotong University(XJTU) | 2024-Current |
| <i>Cyberspace Security</i> | PhD Student |
| • Fujian Normal University(FJNU) | 2021-2024 |
| <i>Cyberspace Security</i> | Master Degree |
| • Tianjin University of Technology(TUT) | 2017-2021 |
| <i>Information Security</i> | Bachelor Degree |