# Xingbo Fu

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## Education

**University of Virginia** — August 2020 — December 2025 (Expected)
*PhD in Computer Engineering* — *Charlottesville, Virginia, USA*

**Xi'an Jiaotong University** — September 2017 — June 2020
*Master in Control Science and Engineering* — *Xi'an, Shaanxi, China*

**Xi'an Jiaotong University** — September 2013 — June 2017
*Bachelor in Automation* — *Xi'an, Shaanxi, China*

## Experience

**Amazon** — May 2024 — August 2024
*Applied Scientist Intern* — *Seattle, Washington, USA*

- **Morel pre-training and fine-tuning**: temporal graph foundation model pre-training via link prediction and fine-tuning for fraud detection on Amazon marketplace data
- **Algorithmic design**: edge type-wise graph prompting for temporal graph foundation model adaptation
- **Performance evaluation**: empirical validation of graph prompting on production data for fraud detection, achieving 2.84% performance improvement

**University of Virginia** — August 2020 — Present
*Research Assistant* — *Charlottesville, Virginia, USA*

- **Graph foundation models**: graph prompt tuning for graph model adaptation (ICLR 2025)
- **Federated graph learning**: collaborative training of graph models over heterogeneous graph data (AAAI 2025, KDD 2024, TMLR 2024, arXiv 2024, KDD 2023, KDD Explorations 2022)
- **AI for science**: spatial-temporal learning in healthcare (ICHI 2023) and power systems (ICDMW 2019)

## Publications

- **Edge Prompt Tuning for Graph Neural Networks**
  ***Xingbo Fu***, *Yinhan He*, *Jundong Li*
  The 13th International Conference on Learning Representations (ICLR 2025)
- **Virtual Nodes Can Help: Tackling Distribution Shifts in Federated Graph Learning**
  ***Xingbo Fu***, *Zihan Chen*, *Yinhan He*, *Song Wang*, *Binchi Zhang*, *Chen Chen*, *Jundong Li*
  The 39th Annual AAAI Conference on Artificial Intelligence (AAAI 2025)
- **Federated Graph Learning with Structure Proxy Alignment**
  ***Xingbo Fu***, *Zihan Chen*, *Binchi Zhang*, *Chen Chen*, *Jundong Li*
  The 30th ACM SIGKDD Conference on Knowledge Discovery & Data Mining (KDD 2024)
- **Federated Graph Learning with Graphless Clients**
  ***Xingbo Fu***, *Song Wang*, *Yushun Dong*, *Binchi Zhang*, *Chen Chen*, *Jundong Li*
  Transactions on Machine Learning Research (TMLR 2024)
- **Safety in Graph Machine Learning: Threats and Safeguards**
  *Song Wang*, *Yushun Dong*, *Binchi Zhang*, *Zihan Chen*, ***Xingbo Fu***, *Yinhan He*, *Cong Shen*, *Chuxu Zhang*, *Nitesh V. Chawla*, *and Jundong Li*
  arXiv preprint arXiv:2405.11034 (2024)

- **Federated Few-Shot Learning**
  *Song Wang*, ***Xingbo Fu***, *Kaize Ding*, *Chen Chen*, *Huiyuan Chen*, *Jundong Li*
  The 29th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD 2023)
- **Spatial-Temporal Networks for Antibiogram Pattern Prediction**
  ***Xingbo Fu***, *Chen Chen*, *Yushun Dong*, *Anil Vullikanti*, *Eili Klein*, *Gregory Madden*, *Jundong Li*
  The 11th IEEE International Conference on Healthcare Informatics (IEEE ICHI 2023)
- **Federated Graph Machine Learning: A Survey of Concepts, Techniques, and Applications**
  ***Xingbo Fu***, *Binchi Zhang*, *Yushun Dong*, *Chen Chen*, *Jundong Li*
  ACM SIGKDD Explorations Newsletter 2022
- **Online Clustering based Fault Data Detection Method for Distributed PV Sites**
  *Shujie Wang*, *Feng Gao*, *Jiang Wu*, *Chao Zheng*, ***Xingbo Fu***, *and Fangwei Duan*
  The 39th Chinese Control Conference (CCC 2020)
- **Spatiotemporal Attention Networks for Wind Power Forecasting**
  ***Xingbo Fu***, *Feng Gao*, *Jiang Wu*, *Xinyu Wei*, *Fangwei Duan*
  International Conference on Data Mining Workshops (ICDMW 2019)
- **A Simulation Approach to Multi-Station Solar Irradiance Data Considering Temporal Correlations**
  ***Xingbo Fu***, *Feng Gao*, *Jiang Wu*, *Ruanming Huang*, *Yichao Huang*, *Fei Fei*
  The 8th IEEE Innovative Smart Grid Technologies - Asia (ISGT Asia 2019)
- **Wind Power Capacity Planning in Enterprise's Microgrid based on Approximation Expectation of Operation Cost**
  *Yuzhou Zhou*, *Qiaozhu Zhai*, ***Xingbo Fu***, *Xiaohong Gaun*, *Feng Gao*, *Jiang Wu*
  The 2019 IEEE Power & Energy Society General Meeting (PESGM 2019)
- **A Simulation Method of Solar Irradiance Data Based on Feature Clustering and Markov Transition Probability Matrix**
  ***Xingbo Fu***, *Feng Gao*, *Jiang Wu*, *Xiaohong Gaun*, *Xuan Li*, *Pengyuan Liu*
  The 13th World Congress on Intelligent Control and Automation (WCICA 2018)
- **Hybrid Features based K-means Clustering Algorithm for use in Electricity Customer Load Pattern Analysis**
  *Pengyuan Liu*, *Chenye Yang*, *Jiang Wu*, ***Xingbo Fu***, *Ruanming Huang*, *Fei Fei*
  The 37th Chinese Control Conference (CCC 2018)

## Teaching

- Teaching assistant, Probability (APMA 3100), Spring 2023
- Teaching assistant, Geometry of Data (ECE/CS 6501), Fall 2022
- Teaching assistant, Applied Statistics and Probability (APMA 3110), Spring 2022

## Awards

- KDD Student Travel Award, 2024
- iPRIME Fellowship Award, 2024
- SDM Student Travel Award, 2023
- Graduate with Honor (10%) (Xi'an Jiaotong University), 2020
- Outstanding Graduate Student (Xi'an Jiaotong University), 2019
- Graduate with Honor (10%) (Xi'an Jiaotong University), 2017