Yingxue Zhang

Binghamton University
Computer Science Department
Engineering Building, N04
4400 Vestal Pkwy E
Binghamton, NY 13902

Address: 129 Passaic Ave, APT 301, Kearny, NJ 07032
Email: yzhang42@binghamton.edu
Homepage: https://yingxuezhang.com
Github: https://github.com/yingxue-zhang
Phone: +1 (551) 263-9462

Research Summary	Broad research interests include: (1) designing novel data mining, machine learning and AI techniques to solve spatial-temporal big data analytics problems related to smart cities, public safety, sustainability and business, and (2) human behavior analysis and decision making with meta-learning, reinforcement learning and imitation learning.

Work Experience

Binghamton University, Binghamton, NY
Assistant Professor   Aug 2022-Present

Nuro, Mountain View, CA
Research Intern   May 2021-Aug 2021

Worcester Polytechnic Institute, Worcester, MA
Teaching Assistant   Jan 2020-May 2022

Worcester Polytechnic Institute, Worcester, MA
Research Assistant   Aug 2018-Jan 2020

Education

Worcester Polytechnic Institute (WPI), Worcester, MA   Aug 2018-May 2022
Ph.D., Data Science, Data Science Department
Thesis: Spatial-Temporal Generative Adversarial Learning.

Stevens Institute of Technology, Hoboken, NJ   Aug 2016-May 2018
M.S., Financial Engineering (Data Science Track), School of Business

Shanghai Jiao Tong University, Shanghai, China   Sep 2012-July 2016
B.E., Computer Science, School of Electronic, Information and Electrical Engineering

Teaching Experience

Computer Science Department, Binghamton University
Instructor   Aug 2022-Present
Courses: Python and Data Mining (INFO 501), Applied Data Mining (INFO 535), Applied Machine Learning (INFO 536)

Data Science Department, Worcester Polytechnic Institute
Teaching Assistant   Jan 2020-May 2022
Courses: Database Management Systems (CS 542), Reinforcement Learning (DS 595)

Foisie Business School, Worcester Polytechnic Institute
Guest Lecturer   May 2021
Course: Introduction to Data Science (DS1010)

Conference Publications	**[C1] Yingxue Zhang**, Yanhua Li, Xun Zhou, Xiangnan Kong and Jun Luo. STrans-GAN: Spatially-Transferable Generative Adversarial Networks for Urban Traffic Estimation. 2022 IEEE International Conference on Data Mining (ICDM).

[C2] Yingxue Zhang, Yanhua Li, Xun Zhou and Jun Luo. Mest-GAN: Cross-City Urban Traffic Estimation with Meta Spatial-Temporal Generative Adversarial Networks. 2022 IEEE International Conference on Data Mining (ICDM).

[C3] Yingxue Zhang, Yanhua Li, Xun Zhou, Zhenming Liu and Jun Luo. C^3-GAN: Complex-Condition-Controlled Urban Traffic Estimation through Generative Adversarial Networks. 2021 IEEE International Conference on Data Mining (ICDM).

[C4] Yingxue Zhang, Yanhua Li, Xun Zhou, Xiangnan Kong and Jun Luo. Curb-GAN: Conditional Urban Traffic Estimation through Spatio-Temporal Generative Adversarial Networks. In Proceedings of the 26th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD' 20).

[C5] Yingxue Zhang, Yanhua Li, Xun Zhou and Jun Luo. cST-ML: Continuous Spatial-Temporal Meta-Learning for Traffic Dynamics Prediction. 2020 IEEE International Conference on Data Mining (ICDM).

[C6] Han Bao, Xun Zhou, **Yingxue Zhang**, Yanhua Li, Yiqun Xie. COVID-GAN: Estimating Human Mobility Responses to COVID-19 Pandemic through Spatio-Temporal Conditional Generative Adversarial Networks. In Proceedings of the 28th ACM SIGSPATIAL International Conference on Advances in Geographic Information Systems.

[C7] Yingxue Zhang, Yanhua Li, Xun Zhou, Xiangnan Kong and Jun Luo. Traffic-GAN: Off-Deployment Traffic Estimation with Traffic Generative Adversarial Networks. 2019 IEEE International Conference on Data Mining (ICDM).

Journal Publications	**[J1] Yingxue Zhang**, Yanhua Li, Xun Zhou, Jun Luo and Zhi-Li Zhang. Urban Traffic Dynamics Prediction — A Continuous Spatial-Temporal Meta-Learning Approach. In ACM Transactions on Intelligent Systems and Technology (TIST).

[J2] Han Bao, Xun Zhou, Yiqun Xie, **Yingxue Zhang** and Yanhua Li. COVID-GAN+: Estimating Human Mobility Responses to COVID-19 through Spatio-Temporal Generative Adversarial Networks with Enhanced Features. In ACM Transactions on Intelligent Systems and Technology (TIST).

[J3] Yingxue Zhang, Yanhua Li, Xun Zhou, Xiangnan Kong and Jun Luo. Off-Deployment Traffic Estimation — A Traffic Generative Adversarial Networks Approach. In IEEE Transactions on Big Data (TBD).

Conference Presentations	**IEEE International Conference on Data Mining (ICDM)**

Conference Presenter   Orlando, Florida, Nov 2022
Topic 1: STrans-GAN: Spatially-Transferable Generative Adversarial Networks for Urban Traffic Estimation,
Topic 2: Mest-GAN: Cross-City Urban Traffic Estimation with Meta Spatial-Temporal Generative Adversarial Networks.

IEEE International Conference on Data Mining (ICDM)
Conference Presenter   Virtual event, Nov 2021
Topic: C^3-GAN: Complex-Condition-Controlled Urban Traffic Estimation through Generative Adversarial Networks.

IEEE International Conference on Data Mining (ICDM)
Conference Presenter   Virtual event, Nov 2020
Topic: cST-ML: Continuous Spatial-Temporal Meta-Learning for Traffic Dynamics
Prediction.

ACM SIGKDD Conference on Knowledge Discovery and Data Mining
Conference Presenter   Virtual event, Aug 2020
Topic: Curb-GAN: Conditional Urban Traffic Estimation through Spatio-Temporal
Generative Adversarial Networks.

IEEE International Conference on Data Mining (ICDM)
Conference Presenter   Beijing, China, Nov 2019
Topic: Traffic-GAN: Off-Deployment Traffic Estimation with Traffic Generative
Adversarial Networks.

Mentoring Experience	**Mentor for Yiqing Zhang**, Ph.D. student in Data Science, WPI Project: Activity-Based Travel Demand Modelling for Urban Planning	Spring 2021
	Mentor for Zixuan Zhang, Graduate student in Data Science, WPI Project: Spatial-Temporal Data Analytics For Travel Demand Prediction	Fall 2020
Awards	**ICDM 2020 Student Travel Award**	2020
	ACM SIGKDD Student Registration Award	2020
	Scholarship for International Students, Stevens Institute Technology	2016-2017
Academic Service	**Reviewer** for AAAI (2020, 2021), WWW (2020,2021) IJCAI (2019, 2020, 2021), KDD (2019, 2020, 2021, 2022), SDM (2020, 2021), ICLR 2021, CIKM (2019, 2020, 2021), ICDM (2020,2021)	
Technical Skills	Python, R, C/C++ PyTorch, TensorFlow, LaTeX, Matlab, SQL	