

Yingxue Zhang

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Summary

Ph.D. candidate in Data Science, with strong deep learning background and programming skills and the ability to work independently or as part of a research team. Broad research interests include:

- deep learning
- meta-learning
- reinforcement learning
- imitation Learning
- spatial-temporal data mining
- big data analysis

Education

Worcester Polytechnic Institute (WPI)

Ph.D. Candidate in Data Science. GPA 4.0/4.0

Worcester, MA

Expected 2022

Stevens Institute of Technology

M.S in Financial Engineering (Data Science Track). GPA 3.98/4.0

Hoboken, NJ

2016-2018

Shanghai Jiao Tong University

B.E in Computer Science

Shanghai, China

2012-2016

Research & Work Experience

Worcester Polytechnic Institute, Laboratory of Prof. Yanhua Li

Research Assistant

Worcester, MA

Aug 2018-Present

Funded by National Science Foundation

- Combined the meta reinforcement learning with meta imitation learning to enable learning of new behaviours (in progress).
- Proposed a Continuous Spatial-Temporal Meta-Learning algorithm (cST-ML) which employed variational inference and deep neural networks to better capture the temporal uncertainties of time series data.
- Proposed a novel generative adversarial networks equipped with dynamic convolutional layer and self-attention mechanism to solve the spatial-temporal estimation problem.
- Designed a novel generative adversarial networks to better capture the spatial patterns of spatial-temporal data.

Worcester Polytechnic Institute, Data Science Research Group

Research Member

Worcester, MA

Aug 2018-Present

- Supervised research projects of graduate students on human mobility estimation with conditional generative adversarial networks.
- Assisted other research members in solving research issues related to deep learning and large-scale data analytics.

Stevens Institute of Technology

Teaching Assistant

Hoboken, NJ

Aug 2017-May 2018

- Assisted in teaching graduate courses including Data Mining and Database Management.

Technical Skills

- **Programming:** Python, R, C/C++, Java
- **Frameworks:** PyTorch, TensorFlow, scikit-learn, NumPy, SciPy
- **Others:** L^AT_EX, Matlab, SQL

Publications

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

- [TBD] **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.
- [Under Submission] **Yingxue Zhang**, Yanhua Li, Xun Zhou and Jun Luo. cST-ML: Continuous Spatial-Temporal Meta-Learning for Traffic Dynamics Prediction.
- [Under Submission] 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.

Conference & Presentation Experience

26th ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD '20) <i>Conference Presentor</i>	Virtual Event <i>Expected Aug 2020</i>
2019 IEEE International Conference on Data Mining (ICDM) <i>Conference Presentor</i>	Beijing, China <i>Nov 2019</i>
Graduate Research Innovation Exchange (GRIE) <i>Poster Presentor</i>	Worcester, MA <i>Feb 2019</i>

Awards

Graduate Fellowship by National Science Foundation	2018-Present
Scholarship for international students from Stevens Institute of Technology	2016-2018