Yunyu Liu

EDUCATION

09/2020 - now **Purdue University, Indiana, USA**
Ph.D., *Major: Computer Science*

09/2018 - 05/2020 **Northeastern University (NEU), Boston, USA**
M.S., *Major: Computer Engineering*

09/2014 - 07/2018 **Shanghai Jiao Tong University (SJTU), Shanghai, China**
B.Eng., *Major: Electrical Engineering* *Minor: Finance*

SELECTED PUBLICATIONS[MORE CAN BE FOUND HERE]

01/2022 **Yunyu Liu**, Jianzhu Ma, Pan Li, "Neural Predicting Higher-order Patterns in Temporal Networks," WWW 2022

09/2021 Lichen Wang, Bo Zong, **Yunyu Liu**, Can Qin, Wei Cheng, Wenchao Yu, Xuchao Zhang, Haifeng Chen, Yun Fu, "Aspect-based Sentiment Classification via Reinforcement Learning," ICDM 2021

01/2021 Yanbang Wang, Yen-Yu Chang, **Yunyu Liu**, Jure Leskovec, Pan Li, "Inductive Representation Learning in Temporal Networks via Causal Anonymous Walks," ICLR 2021

07/2020 **Yunyu Liu**, Lichen Wang, Yue Bai, Can Qin, Zhengming Ding, Yun Fu, "Generative View-Correlation Adaptation for Semi-Supervised Multi-View Learning," ECCV 2020

08/2019 Lichen Wang, Zhengming Ding, Zhiqiang Tao, **Yunyu Liu**, Yun Fu, "Generative Multi-View Human Action Recognition," ICCV 2019 (Oral)

05/2018 **Yunyu Liu**, Zhiyang Xia, Ping Yi, Wei Wang, Yao Yao, Ting Zhu, Tiantian Xie, "GENPass: A General Deep Learning Model for Password Guessing with PCFG Rules and Adversarial Generation," ICC 2018

WORK EXPERIENCE

Meta, MGenAI, Software Engineer Intern, Machine Learning(PhD) **May 2024 – July 2024**

- Analyze the data, design a new reward model, and apply Proximal Policy Optimization (PPO) for better advertisement.

SCIENTIFIC RESEARCH EXPERIENCE

Purdue University, CGV Lab **Jan 2022 – July 2024**

Multiview Point cloud registration (ongoing)

- Register different views from one scene using an end-to-end deep learning-based method.

Terrain Generation using Single Image

- Implement Graph Neural Network, GAN-based, and other cutting-edge machine learning algorithms for generation.
- The first to generate terrain using machine learning algorithms and a single image.
- Design a VLM system that allows the users to generate plausible terrain coverage.

Purdue University, GCoM, **Sep 2020 – Jan 2022**

Pattern prediction in the temporal network

- Developed a causal anonymous walk technique to extract the temporal information efficiently and effectively.
- Defined the interaction expansion of three nodes (a triplet) in a temporal hypergraph.
- Designed a model to find what type of, when, and why the interaction happens among a triplet with low computational resources.

Northeastern University, Synergetic Media Learning Lab, **Oct 2018 – Aug 2020**

Semi-supervised Multi-view Learning

- Employed generative models and domain adaptation to multi-view learning to fully explore multi-view information.
- Proposed a graph-based method for the label-level fusion and utilized information entropy to help the fusion.

Multi-aspect Sentiment Classification (Collaborate with NEC lab)

- Developed a reinforcement learning model to align the task-relevant words with aspects accurately.
- Developed an end-to-end pipeline for the agents to explore paths from target aspect nodes to their potential sentimental regions based on a minimum spanning tree algorithm.