

# 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, GPA: 3.57*

## 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

## SCIENTIFIC RESEARCH EXPERIENCE

### Purdue University, CGV Lab

Jan 2022 – July 2023

Terrain Generation using Single Image

- Design an interactive User Interface(UI) for terrain generation.
- 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.
- Rendering the result using Blender.

### 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.
- 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.