

XIASI WANG

(86) 151-5601-7806 \diamond xwangfy@connect.ust.hk \diamond [linkedin.com/in/wxs](https://www.linkedin.com/in/wxs)

EDUCATION

The Hong Kong University of Science and Technology
Ph.D. in Data Science and Analytics

Hong Kong
2020.09 – 2024.06

Research interests: Machine Learning, Self-Supervised Learning

University of Science and Technology of China
B.S. in Statistics

Hefei, China
2016.09 – 2020.06

Honors: Outstanding Graduate Award (top 10%), Outstanding Undergraduate Scholarship (all three years)

INTERNSHIP EXPERIENCE

Noah's Ark Lab, Huawei Technologies Co., Ltd
Artificial Intelligence Algorithm Research Intern

Shenzhen, China
2022.04 – Present

- Focused on self-supervised learning and researched the multi-view perspective of self-supervised learning in computer vision systematically
- Refined multi-view information bottleneck, and developed the multi-view entropy bottleneck method to obtain the minimal sufficient representation with better performance
- Validated the superiority of MVEB on ImageNet linear protocol (76.9% top-1 acc. with ResNet-50 backbone, so far the best) and extensive downstream tasks including transfer learning and object detection
- **Manuscript:** MVEB: Self-Supervised Learning with Multi-View Entropy Bottleneck, 2022

RESEARCH PROJECTS

Negatives Selection for Contrastive Learning

2021.12 – 2022.04

Data Science and Analytics, Information Hub, HKUST

- Researched the selection criterion of negative samples in contrastive learning
- Used quantitative analysis to find that the semi-hard negatives play an important role in contrastive learning since easy negatives provide negligible contrastive gradients and hard negatives suffer from the false negative problem, and discovered an exponential decaying relation of hardness vs. false rate
- Proposed a hardness-aware debiasing method based on the observed relation to mitigate the side effect of false negatives, and achieved an improvement of 3%-5% top-1 acc. on Cifar-10/100
- **Manuscript:** Hardness-Aware Contrastive Learning, 2022

Systemic Risk Contagion of Financial Networks

2019.07 – 2020.01

Department of Statistics and Finance, School of Management, USTC

- Learned a risk contagion model for financial networks which triggers the contagion before default
- Assigned prior distributions to the connection probabilities and connection weights among banks for the Gibbs Sampler to construct a liability matrix of a Chinese bank network
- Explored the model's sensitivity to its parameters
- **Publication:** Solvency Contagion Risk in the Chinese Commercial Bank Network, *Physica A*, 2021

COMPUTATIONAL SKILLS & OTHERS

Programming Languages & Tools

Python (Numpy, Pandas, Matplotlib), R, \LaTeX

Languages

Mandarin, English

Other Technical Skills

Deep Learning (Pytorch)