

Kay (Zekuan) Liu

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EDUCATION

University of Illinois Chicago (UIC)

August 2021 - Present

- **Ph.D.** in Computer Science, **GPA:** 4.0/4.0 **Advisor:** Prof. Philip S. Yu
- **Research Assistant:** AY 2021-2022, **Teaching Assistant:** AY 2022-2023
- **Research Interests:** Graph Mining, Anomaly Detection, Fraud Detection

Beijing University of Posts and Telecommunications (BUPT)

September 2017 - July 2021

- **Bachelor of Engineering** in Internet of Things Engineering, **GPA:** 3.62/4.0

Queen Mary University of London (QMUL)

September 2017 - July 2021

- **Bachelor of Science (Engineering)** with honors, First Class, in Internet of Things (Joint Program with BUPT)

Universitat Politècnica de València (UPV)

January 2021 - May 2021

- **Exchange Student** for thesis: Dimension Reduction Methods Applied to Sleep Stage Analysis

University of California, Berkeley

July 2019 - August 2019

- **Summer Session**, **GPA:** 3.65/4.0

PUBLICATIONS

- Liu, Kay, Yingtong Dou, Yue Zhao et al. "BOND: Benchmarking Unsupervised Outlier Node Detection on Static Attributed Graphs." In *Thirty-sixth Conference on Neural Information Processing Systems (NeurIPS)*. 2022.
- Liu, Kay, Yingtong Dou, Yue Zhao et al. "PyGOD: A Python Library for Graph Outlier Detection." *arXiv preprint arXiv:2204.12095* (2022).
- Zhao, Jianan, Xiao Wang, Chuan Shi, Zekuan Liu, and Yanfang Ye. "Network Schema Preserving Heterogeneous Information Network Embedding." In *International Joint Conference on Artificial Intelligence (IJCAI)*. 2020.

RESEARCH EXPERIENCES

Walmart Global Tech

May 2022 - August 2022

Data Scientist Intern

Mentor: Tanay Kumar Saha

- Improved query classification for sponsored search with heterogeneous graph (paper in progress)

Amazon Web Service (AWS) Shanghai AI Lab

May 2021 - July 2021

Software Development Engineer Intern

Mentor: Dr. Jian Zhang

- Implemented three fraud detection related [DGL](#) model examples, including [GAS](#), [CARE-GNN](#), and [GeniePath](#)
- Contributed two DGL built-in graph datasets, including [fraud dataset](#) and [fake news dataset](#)

Graph Data Mining and Machine Learning Lab, BUPT

October 2019 - January 2020

Research Assistant

Advisor: Prof. Chuan Shi

- Implemented models such as LINE, Metapath2Vec, HIN2Vec for baseline experiments
- Optimized, evaluated, and visualized the result of experiments

HONORS & AWARDS

- NeurIPS Scholar Award October 2022
- BUPT Outstanding Thesis Award (2%) June 2021

PROFESSIONAL SERVICES

- **Reviewer:** NeurIPS Datasets and Benchmarks Track 2022, Elsevier Big Data Research
- **External Reviewer:** ACM SIGKDD 2022, CIKM 2022, ASONAM 2022

Invited Talks

- **Graph Neural Network based Anomaly Detection** BUAA, October 2022
- **Graph Neural Network based Anomaly Detection** Novartis, August 2022
- **Leveraging Graph Neural Networks for Financial Fraud Detection** KDD 2022 Workshop Tutorial, August 2022