Yifei, ZHANG (Last Updated on Feb. 2023) Linkedin Google Scholar Website

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Research

My research generally focuses on developing machine learning algorithms applied to graph-structured data. I have worked on developing generalized graph neural networks that are scalable to web-scale datasets, with applications in recommender systems, NLP.

Education

The Chinese University of Hong Kong — Aug. 2020 - July 2024 (Excepted)
Ph.D. candidate, Dept. of Comp. Sci. & Eng. — HongKong, China
Advised by Prof. Irwin King (Chairman, IEEE Fellow)

The Australian National University — July 2016 - July 2018
MPhil. Student in Computer Science — Canberra, Australia

ZhengZhou University — Sep. 2012 - July 2016
B.Eng. Student in Electrical Engineering — ZhengZhou, China

Experience

Alibaba Group — Hangzhou, China
(Full-time) Senior Applied Machine Leaning Engineer — May 2019 - Aug. 2020

JD.com — July 2018-May 2019
(Full-time) Applied Machine Leaning Engineer — Beijing, China

Data61 — Canberra, Australia
Research Intern — Nov. 2016 - Mar. 2017

Conference Publications

[1] **(WWW'23)** Chen, Y., Fang. Y, **Zhang, Y.** and King, I., 2023, Aug. Bipartite Graph Convolutional Hashing for Effective and Efficient Top-N Search in Hamming Space.. In Proceedings of The Web Conference 2023. [19.2% of acceptance, 365/1900].

[2] **(AAAI'23, Oral)** **Zhang, Y.**, Zhu, H., Song, Z., Koniusz, P. and King, I., 2023, Feb. Spectral Feature augmentation for Graph Contrastive Learning. In Thirty-Seventh AAAI Conference on Artificial Intelligence [19.8% acceptance, 1721/8777].

[3] **(AAAI'23)** Ma, Y., Song, Z., Hu, X., Li, J. **Zhang, Y.** and King, I., 2023, Feb. Graph Component Contrastive Learning for Concept Relatedness Estimation. In Thirty-Seventh AAAI Conference on Artificial Intelligence [19.8% acceptance, 1721/8777]

[4] **(KDD'22)** **Zhang Y.**, Zhu, H., Meng, Z., Koniusz, P. and King, I., 2022, Aug. COSTA: Covariance Preserved Feature Augmentation for Graph Contrastive Learning. In Sigkdd Conference on Knowledge Discovery and Data Mining. [14.9% acceptance, 254/1695].

[5] **(KDD'22)** Song, Z., **Zhang, Y.**, and King, I, 2022, Aug. Towards an Optimal Asymmetric Graph Structure for Robust Semi-supervised Node Classification. In Sigkdd Conference on Knowledge Discovery and Data Mining[14.9% acceptance, 254/1695].

[6] **(WWW'22)** **Zhang Y.**, Zhu, H., Meng, Z., Koniusz, P. and King, I., 2022, April. Graph-adpative Rectified Linear Unit for Graph Neural Networks. In Proceedings of The Web Conference 2022. [17.7% of acceptance, 232/1822].

[7] **(CIKM'21)** Song, Z., Meng, Z., **Zhang, Y.**, & King, I. (2021, October). Semi-supervised Multi-label Learning for Graph-structured Data. In Proceedings of the 30th ACM International Conference on Information & Knowledge Management. [21.7% acceptance (271/1251)]

[8] **(ICASSP'20)** **Zhang, Y.** and Zhu, H., (2020, May). Discrete Wasserstein Autoencoders for Document Retrieval. In 2020 IEEE International Conference on Acoustics, Speech and Signal Processing.

[9] (**NAACL'19**) **Zhang, Y.** and Zhu, H., (2019, June). Doc2hash: Learning Discrete Latent variables for Documents Retrieval. In Proceedings of the 2019 Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies. [26.3% acceptance (281/1067)].

[10] (**ICWSM'18**) Rizoiu, M. A., Graham, T., Zhang, R., **Zhang, Y.**, Ackland, R., Xie, L. (2018, June). #DebateNight: The Role and Influence of Socialbots on Twitter During the 1st 2016 US Presidential Debate. In Twelfth International AAAI Conference on Web and Social Media.

Preprints & Workshop

[11] (**ArXiv**) Chen, Y., **Zhang, Y.**, Zhang, Y., Guo, H., Li, J., Tang, R., He, X. and King, I., 2021. Towards Low-loss 1-bit Quantization of User-item Representations for Top-K Recommendation. arXiv preprint. arXiv:2112.01944.

[12] (**IJCAI'19**) **Zhang, Y.** and Zhu, H. Deep Neural Network for Asymmetrically Collaborative Machine Learning with Additively Homomorphic Encryption. In The 1st International Workshop on Federated Machine Learning for User Privacy and Data Confidentiality. Solutions have been included in *FATE*, an industry level open source library for federated learning. See *this* for detail

Teaching

- CSCI3150: Computer Science and Society — Spring 2022
- CSCI5650: Graph Neural Networks (Graduated-Level Course) — Autumn 2021
- CSCI3150: Computer Science and Society — Spring 2021
- CSCI1130: Introduction to Computing Using Java — Autumn 2020

Academia Services

- Reviewer for conferences: NeurIPS'22, PAKDD'22, ECCV'22, ICML'22, ICCV'22, WWW'22, AAAI'21, CIKM'21, NIPS'21, IJCAI'21.
- Reviewer for journals: TKDE, Neurocomputing,

Selected Honors & Awards

- Hong Kong Postgraduate Studentships Award (CUHK) — Autumn 2020
- CECS Dean's List(ANU) — Autumn 2018
- Notional Scholarship Award (ZZU) — Autumn 2015