

KELONG MAO

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EDUCATION

Renmin University of China & Université de Montréal	09/2021 – 06/2025 (expected)
Joint Ph.D. in Artificial Intelligence (in RUC) and Computer Science (in UdeM)	
Tsinghua University	09/2018 – 06/2021
M.Eng. in Computer Technology	
Nankai University	09/2014 – 06/2018
B.Eng. in Computer Science and Technology	

EXPERIENCE

Huawei Poisson Lab	Beijing, China
Research Intern	03/2022 – Present
<ul style="list-style-type: none">Studying on conversational search, especially conversational passage retrieval. Ongoing.	
Huawei Noah's Ark Lab	Shenzhen, China
Research Intern, Advisor: Dr. Jieming Zhu	12/2019 – 07/2020
<ul style="list-style-type: none">Proposed <i>UltraGCN</i>, an efficient GNN-based recommendation model that directly mimics the effect of infinite-layer message passing to learn various user-item relationships more flexibly. Published in CIKM'21.Aroused the recommendation community's concern about the loss function. Proposed a Cosine Contrastive Loss and a strong baseline <i>SimpleX</i> which achieved SOTA performance with extremely simple architecture. Published in CIKM'21.Proposed <i>TagGNN</i>, a heterogeneous graph neural network for more accurate item tagging under information retrieval scenario. Published in SIGIR'20.	
Tencent AI Lab	Shenzhen, China
Research Intern, Advisor: Dr. Peilin Zhao	07/2019 – 12/2019
<ul style="list-style-type: none">Designed a <i>Graph-enhanced Transformer</i> framework to leverage the graph and sequence information of the molecule for retrosynthesis prediction. Published in Neurocomputing'21.	

PUBLICATIONS

* indicates equal contributions.

- Kelong Mao**, Zhicheng Dou, Hongjin Qian, "Curriculum Contrastive Context Denoising for Few-shot Conversational Dense Retrieval," in **SIGIR'22 (Full paper)**,
- Jieming Zhu*, **Kelong Mao***, Quanyu Dai, Liangcai Su, Rong Ma, Jinyang Liu, Guohao Cai, Zhicheng Dou, Xi Xiao, Rui Zhang, "BARS: Towards Open Benchmarking for Recommender Systems," in **SIGIR'22 (Long paper, Resource track)**, [Github]
- Kelong Mao** Jieming Zhu, Xi Xiao, Biao Lu, Zhaowei Wang, Xiuqiang He, "UltraGCN: Ultra Simplification of Graph Convolutional Networks for Recommendation," in **CIKM'21 (Full paper)**, [Github] [PDF]
- Kelong Mao***, Jieming Zhu*, Jinpeng Wang, Quanyu Dai, Zhenhua Dong, Xi Xiao, Xiuqiang He, "SimpleX: A Simple and Strong Baseline for Collaborative Filtering," in **CIKM'21 (Full paper)**, [Github] [PDF]
- Kelong Mao**, Xi Xiao, Guangwu Hu, Xiapu Luo, Bin Zhang, Shutao Xia, "Byte-Label Joint Attention Learning for Network Traffic Classification," in **IWQoS'21 (Full paper)**, [PDF]
- Kelong Mao**, Xi Xiao, Jieming Zhu, Biao Lu, Ruiming Tang, Xiuqiang He, "Item Tagging for Information Retrieval: A Tripartite Graph Neural Network based Approach," in **SIGIR'20 (Long paper, Industry track)**, [PDF]
- Kelong Mao**, Xi Xiao, Tingyang Xu, Yu Rong, Junzhou Huang, Peilin Zhao, "Molecular Graph Enhanced Transformer for Retrosynthesis Prediction," in **Neurocomputing'21 (Full paper)**, [Github] [PDF]

SKILLS

Professional Knowledge: Information Retrieval and Recommendation Algorithms, NLP, ML/DL

Programming Languages: Python, C/C++, Java

Tools and Frameworks: Git, \LaTeX , PyTorch

¹This curriculum vitae was last updated at 04/04/2022.