

# Ling Yue

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## EDUCATION

Taiyuan University of Technology | Software Engineering | Bachelor of Engineering 09/2015 - 06/2019  
Selected Courses: Probability and Statistics (92), Java Programming (92), Program Design Curriculum Design (96),  
Computer Network (90), Web System and Technology (93), The Fundamental of Web Development (93)

## RESEARCH

**Research Assistant** *Tsinghua University, Dept. of Electronic Engineering, Prof. Quanming Yao* 07/2022 - Present

- Implemented knowledge graph baseline models, including TransE, ComplEx, RotatE, CompGCN.
- Proposed a searching method by relation-aware ensemble for knowledge graph reasoning.
- Achieved the best on Open Graph Benchmark (wikikg2, biokg) and submitted a paper as the first author<sup>1</sup>.
- Pioneered using Graph Neural Networks (GNN) to predict the side effects of drug combinations in the knowledge graph.
- Proposed BiPath that selects and learns on drug pairs path to provide side information for the emerging drugs.
- Outperformed state-of-the-art results on DrugBank and TWOSIDES as well as submitted a paper as the second author<sup>2</sup>.

## EMPLOYMENT

**Senior Algorithm Engineer** *Shopee, ShopeeFood Department* 03/2021 - 07/2022

- Launched an automated assignment system by Golang and Python for Shopee's Global Delivery Platform from scratch.
- Designed a cost function for the multi-objective assignment system considering platforms, merchants, and buyers.
- Accelerated the assignment algorithm by 50x via parallel splitting of a bipartite graph.

**Senior Algorithm Engineer** *Alibaba, Alipay Department, Non-Attack Security Lab* 09/2020 - 03/2021

- Independently developed an automatic rate-risk policy identification system by Platform for AI (PAI) of Aliyun.
- Establish a bipartite graph based on the liquidity network of sellers and buyers in payment application Alipay.
- Collaborated with business, finance, and anti-corruption departments to detect asset losses of over 200 million CNY.

**Algorithm Engineer** *4Paradigm, Machine learning Research Institute* 11/2018 - 09/2020

- Launched the "End-to-End Automatic Machine Learning Framework for Tabular Data" independently.
- Ranked top 1 in the benchmarks and patented three related algorithms and products<sup>3,4,5</sup>.
- Hosted various AutoML competitions related to top academic conferences, including NeurIPS, PAKDD, KDD, WSDM, etc.

**Machine Learning Intern** *Microsoft Research Asia (MSRA), System Group* 03/2018 - 11/2018

- Participated in developing the first version of the Neural Network Intelligence platform (NNI) as the earliest intern.
- Researched automated machine learning for Tabular Data and ranked Top 4 in the NeurIPS AutoML competition.
- NNI became the largest open-source platform in automated machine learning and received 11.5k stars on GitHub.

## PUBLICATIONS

- 1) Zhang, Y., Yue, L., Yao, Q., 2023. Predicting Interactions for Emerging Drugs with Knowledge Graphs. Nature Machine Intelligence. (Submitted)
- 2) Yue, L., Zhang, Y., Yao, Q., 2023. Searching Relation-aware Ensemble for Knowledge Graph Reasoning. Association for Computational Linguistics. (Submitted)
- 3) Yue, L., Guo, X., Tu, W. Method, device, equipment and storage medium for realizing automatic machine learning: CN202010306838.9[P]. 2020-09-01.
- 4) 4Paradigm Beijing Technology Co Ltd. Method, apparatus and device for executing automatic machine learning process: CN202010307807.5[P]. 2020-09-01.
- 5) 4Paradigm Beijing Technology Co Ltd. Method, apparatus, electronic device, and storage medium for tracing the source of infectious diseases:CN202010451918.3[P]. 2020-09-22.

## SELECTED AWARDS

- Top 4, NeurIPS 2018 Competition, Automatic machine learning (AutoML) for lifelong machine learning track
- Top 6 and oral presentation, SMP National Social Media Processing Conference User Portrait Technology Evaluation
- Gold Medal, Shanxi Provincial Collegiate Programming Competition
- Silver Medal, CCF China Computer System and Collegiate Programming Competition National Final
- Province First Prize, National Second Prize, Blue Bridge Cup Programming Competition
- Excellent student, Missouri University Big Data Summer Research