Yanru Qu

Ph.D. in Computer Science - University of Illinois, Urbana-Champaign

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Education

University of Illinois, Urbana-Champaign   **Illinois, U.S.**
Aug. 2019 - 2021, Aug. 2024 - present

- Ph.D. in Computer Science
- Advisor: Prof. **Ge Liu**, Prof. **Jiaxuan You**, Prof. **Jiawei Han**

Shanghai Jiao Tong University   **Shanghai, China**
Sep. 2012 - Mar. 2019

- M.S. in Computer Science, GPA: 3.83/4, Major: 3.93/4
- B.E. in Computer Science (IEEE Honored Class), GPA: 86.87/100, Major: 90.59/100
- Advisors: Prof. **Weinan Zhang**, Prof. **Yong Yu**

Research Interests

My research interests lie in the general area of machine learning, especially their applications in AI4Science, natural language, and recommender system.

Publications (☞Google Scholar Profile, cited by 3,200)

Training Free Guided Flow Matching with Optimal Control
- Luran Wang, Chaoran Cheng, Yizhen Liao, **Yanru Qu**, Ge Liu
- *In Proceedings of ICLR'25*

MolCRAFT: Structure-Based Drug Design in Continuous Parameter Space
- **Yanru Qu***, Keyue Qiu*, Yuxuan Song*, Jingjing Gong, Jiawei Han, Mingyue Zheng, Hao Zhou, Wei-Ying Ma
- *In Proceedings of ICML'24*

Unified Generative Modeling of 3D Molecules via Bayesian Flow Networks
- Yuxuan Song*, Jingjing Gong*, **Yanru Qu**, Hao Zhou, Mingyue Zheng, Jingjing Liu, Wei-Ying Ma
- *In Proceedings of ICLR'24* (Oral)

Hands on Natural Language Processing
- Kewei Tu, Xinyu Wang, **Yanru Qu**, Yong Yu
- *Posts & Telecom Press (2024)*

ClickPrompt: CTR Models are Strong Prompt Generators for Adapting Language Models to CTR Prediction
- J Lin, B Chen, H Wang, Y Xi, **Y Qu**, X Dai, K Zhang, R Tang, Y Yu, W Zhang
- *In Proceedings of WWW'24*

MAP: A Model-agnostic Pretraining Framework for Click-through Rate Prediction
- Jianghao Lin, **Yanru Qu** (corresponding author), Wei Guo, Xinyi Dai, Ruiming Tang, Yong Yu, Weinan Zhang
- *In Proceedings of KDD'23*

User behavior prediction method and apparatus, and behavior prediction model training method and apparatus
- Ruiming Tang, Minzhe Niu, **Yanru Qu**, Weinan Zhang, Yong Yu
- *US Patent 11531867*

Task-wise Split Gradient Boosting Trees for Multi-center Diabetes Prediction
- M Chen, Z Wang, Z Zhao, W Zhang, X Guo, J Shen, **Y Qu**, J Lu, M Xu, Y Xu, T Wang, M Li, W Tu, Y Yu, et.al.
- *In Proceedings of KDD'21*

Coda: Contrast-enhanced and diversity-promoting data augmentation for natural language understanding

- **Yanru Qu**, Dinghan Shen, Yelong Shen, Sandra Sajeev, Jiawei Han, Weizhu Chen
- *In Proceedings of ICLR'21* (cited by 97)

A simple but tough-to-beat data augmentation approach for natural language understanding and generation
- Dinghan Shen, Mingzhi Zheng, Yelong Shen, **Yanru Qu**, Weizhu Chen (cited by 148)

Event Time Extraction and Propagation via Graph Attention Networks
- Haoyang Wen, **Yanru Qu**, Heng Ji, Qiang Ning, Jiawei Han, Avi Sil, Radu Florian, Hanghang Tong, Dan Roth
- *In Proceedings to EMNLP'20*

Multi-document Summarization with Maximal Marginal Relevance-guided Reinforcement Learning
- Yuning Mao, **Yanru Qu**, Yiqing Xie, Xiang Ren, Jiawei Han
- *In Proceedings to EMNLP'20* (cited by 54)

GIKT: A Graph-based Interaction Model for Knowledge Tracing
- Yang Yang, Jian Shen, **Yanru Qu**, Yunfei Liu, Kerong Wang, Yaoming Zhu, Weinan Zhang, Yong Yu
- *In Proceedings of ECML-PKDD'20* (cited by 204)

An End-to-End Neighborhood-based Interaction Model for Knowledge-enhanced Recommendation
- **Yanru Qu***, Ting Bai*, Weinan Zhang, Jianyun Nie, Jian Tang
- *In Workshop of DLP-KDD'19* (Best Paper) (cited by 67)

Dynamically Fused Graph Network for Multi-hop Reasoning
- Yunxuan Xiao*, **Yanru Qu***, Lin Qiu*, Hao Zhou, Lei Li, Weinan Zhang, Yong Yu
- *In Proceedings of ACL'19* (Oral) (cited by 279)

Text-driven Graph Embedding with Pairs Sampling
- Liheng Chen, **Yanru Qu**, Zhenghui Wang, Lin Qiu, Weinan Zhang, Ken Chen, Shaodian Zhang, Yong Yu
- *In Proceedings of WWW'19*

Product-based Neural Networks for User Response Prediction over Multi-field Categorical Data
- **Yanru Qu**, Bohui Fang, Weinan Zhang, Ruiming Tang, Minzhe Niu, Huifeng Guo, Yong Yu, and Xiuqiang He
- *In ACM Transactions on Information System (TOIS)* (cited by 241)

QA4IE: A Question Answering based Framework for Information Extraction
- Lin Qiu, Hao Zhou, **Yanru Qu**, Weinan Zhang, Suoheng Li, Shu Rong, Dongyu Ru, Lihua Qian, Kewei Tu and Yong Yu
- *In Proceedings of ISWC'18* (Oral)

Label-aware Double Transfer Learning for Cross Specialty Medical Named Entity Recognition
- Z Wang, **Y Qu**, L Chen, J Shen, W Zhang, S Zhang, Y Gao, G Gu, K Chen, and Y Yu
- *In Proceedings of NAACL-HLT'18* (Oral) (cited by 98)

Wassertein Distance Guided Representation Learning for Domain Adaptation
- Jian Shen, **Yanru Qu**, Weinan Zhang, Yong Yu
- *In Proceedings of AAAI'18* (cited by 800+)

Product-based Neural Networks for User Response Prediction
- **Yanru Qu**, Han Cai, Kan Ren, Weinan Zhang, Yong Yu, Ying Wen, Jun Wang
- *In Proceedings of ICDM'16* (Oral) (cited by 1,000+)

Experiences

Research Intern at Institute for AI Industry Research (AIR), Tsinghua University   **Beijing, China**
*Worked on AI4Science with Prof. **Hao Zhou** and Prof. **Weiying Ma***   *Aug. 2023 - Aug. 2024*
- Published a paper in ICLR'24 (oral), and a paper in ICML'24.

Research Intern at D365 Group, Microsoft   **Washington, US**
*Worked on NLP with Dr. **Dinghan Shen**, Dr. **Yelong Shen**, and Dr. **Weizhu Chen***   *May. 2020 - Aug. 2020*

○ Finished 2 papers, one is published in ICLR'21

Research Intern at NLP Group, ByteDance AI Lab **Shanghai, China**
*Worked on NLG with Dr. **Hao Zhou** and Dr. **Lei Li*** *Apr. 2019 - Aug. 2019*

Research Intern at Montreal Institute of Learning Algorithms (MILA) **Montreal, Canada**
*Worked on GNN with Prof. **Jian Tang** and Prof. **Jianyun Nie** (UdeM)* *June. 2018 - Nov. 2018*
○ Published and won the **best paper award** of DLP-KDD'19.

Student Researcher at APEX Lab, Shanghai Jiao Tong University (SJTU) **Shanghai, China**
*Worked with Prof. **Weinan Zhang**, Prof. **Yong Yu*** *Sep. 2015 - Mar. 2019*
○ Published several papers in ACL, KDD, AAAI, etc.

Chief Technology Officer at Sixiangjiyuan Co. Ltd. **China**
Developed a campus online shopping platform, UHands *Sep. 2014 - Sep. 2015*
○ Joined Sixiangjiyuan Co. Ltd., a university venture company.
○ The venture company got CNY ¥ 1,000,000 angel investment.

Selected Awards

○ **Best Paper Award** (DLP-KDD'19) *2019*
○ **Shanghai Outstanding Graduate** (Top 3 in CS Department) *2019*
○ **National Scholarship for Graduate Students** (Top 3 in CS Department) *2018*
○ **National Scholarship for Graduate Students** (Top 5 in CS Department) *2017*

Open Source Projects

○ Implementation of **knowledge-enhanced neighborhood interaction** framework, 60+ stars on github

○ Implementation of **product-nets** and **its distributed version**, 500+ stars on github