

SHILIN QU

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👤 PERSONAL INTRODUCTION

I am currently a final-year Ph.D. student in Artificial Intelligence at Monash University. My research interests are broad, encompassing recommendation systems (efficient recommendation algorithms, sequential recommendation), applications of large language models (automated understanding and construction of social norms, retrieval-augmented generation, conversation-based recommendation systems using large language models), hypergraph representation learning, and graph representation learning. I am committed to solving complex problems in data science and advancing technology through innovative research methods.

🎓 EDUCATION

Monash University, Melbourne, Australia Dec. 2021 – Present. (March. 2025)
PhD student (Artificial Intelligence and Data Science)
Supervisor: Dr. Weiqing Wang, Prof. Yuanfang Li, Prof. Gholameza Haffari

Northeast University (NEU), Liaoning, China Sep. 2017 – Jan. 2020
MSc in Software Engineering
Supervisor: Prof. Guibing Guo

Northeast University (NEU), Liaoning, China Sep. 2013 – Jun. 2017
BEng in Software Engineering

👥 PROFESSIONAL EXPERIENCE

Teaching Assistant, Monash University Feb. 2023 – Feb. 2024
Course: FIT9136 - Algorithms and programming foundations in Python
Responsibilities Teaching and assisting students in understanding advanced Python concepts and applications.

Research Assistant, Monash University Feb. 2022 – Dec. 2023
Project: Computational Cultural Understanding (CCU)
Supervisor: Prof. Yuanfang Li, Prof. Reza Haffari
The CCU project aims to enhance situational awareness and interaction effectiveness in diverse cultural settings through advanced natural language processing technologies.
Responsibilities: Constructed a multicultural sociocultural norms knowledge base using LLM and prompt engineering techniques.

Research Assistant, Westlake University April. 2021 – Dec. 2021
Supervisor: Dr. Fajie Yuan (<https://fajieyuan.github.io>)
Responsibilities: Developed novel algorithms for transfer learning on recommendation.

Mining Application Group Member (Intern), PCG, Tencent Mar. 2019 – Aug. 2019
Supervisor: Dr. Fajie Yuan (<https://fajieyuan.github.io>)
Responsibilities: Developed novel algorithms for efficient short video recommendation.

LibRec. Open Source Project Oct. 2017 – Aug. 2018
A Leading Java Library for Recommender Systems.
Responsibilities As a Java developer reimplemented recommender algorithms and conducted function tests.

📄 PUBLICATIONS

1. **Shilin Qu**, Weiqing Wang, et al. Scalable and Effective Negative Sample Generation for Hyperedge Prediction. *ICDE 2024, IEEE International Conference on Data Engineering*.. **submitted**
2. Viet Thanh Pham, **Shilin Qu**, et al. Multi-Cultural Norm Base: Frame-based Norm Discovery in Multi-Cultural Settings. *CoNLL 2024, Conference on Computational Natural Language Learning*. **accepted**

3. **Shilin Qu**, Weiqing Wang, et al. Scalable Frame-based Construction of Sociocultural NormBases for Socially-Aware Dialogues. *TOMM 2024, ACM Transactions on Multimedia Computing, Communications, and Applications*. **accepted**
4. Haolan Zhan, ..., **Shilin Qu**, et al. RENOV1: A Benchmark Towards Remediating Norm Violations in Socio-Cultural Conversations. *NAACL 2024, 2024 Annual Conference of the North American Chapter of the Association for Computational Linguistics*. **accepted**
5. **Shilin Qu**, Weiqing Wang, et al. More Effective Information Propagation for Hypergraph Representation Learning with One-Stage Message Passing. *Neural Network 2024*. **submitted**
6. Farhad Moghimifar, **Shilin Qu**, et al. NormMark: A Weakly Supervised Markov Model for Socio-cultural Norm Discovery. *ACL 2023, The 61nd Annual Meeting of the Association for Computational Linguistics (CCF A)*. **accepted**
7. **Shilin Qu**, Fajie Yuan, Guibing Guo, et al. CmnRec: Sequential Recommendations with Chunk-Accelerated Memory Network. *TKDE 2022, IEEE Transactions on Knowledge and Data Engineering (SCI, IF=6.977; CCF A)*. **accepted**
8. **Shilin Qu**, Guibing Guo, et al. Fast Discrete Factorization Machine for Personalized Item Recommendation. *Knowledge-Based System, 2020 (SCI, IF=5.101)*. **accepted**
9. Guo Guibing, Feida Zhu, **Shilin Qu**, et al. PCCF: Periodic and Continual Temporal Co-Factorization for Recommender Systems. *Information Science, 2018 (SCI, IF=5.524)*. **accepted**

PATENT

1. **Shilin Qu**, Fajie Yuan, et al. Information Recommender Method, Device, Electronic Equipment, and Computer Readable Storage Media. Chinese Patent. Open Number: CN110674181B **open**
2. **Shilin Qu**, Fajie Yuan, et al. Information Recommender Method, Device, Electronic Equipment, and Computer Readable Storage Media. Chinese Patent. Open Number: CN110727705B **open**

Tips: Both patents were completed during the internship at Tencent, and they share the same title.

CODING LANGUAGES AND LIBRARIES

Python, Java
Pytorch, Tensorflow, pytorch-geometric