YUTING NING

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EDUCATION

Master in Computer Science, University of Science and Technology of China — June, 2024 (expected)
Research Interest: Data Mining, Natural Language Processing, Intelligent Education
Advisor: Enhong Chen
GPA: 4.11 / 4.3

Bachelor in Computer Science, University of Science and Technology of China — June, 2021
Hua Xia Talent Program in Computer Science and Technology
GPA: 3.93 / 4.3

RESEARCH EXPERIENCE

Graduate Research Assistant, University of Science and Technology of China — Sep. 2021 - Present
BDAA-BASE Group — Hefei, China
Advisor: Enhong Chen

- Working on natural language processing and intelligent education
- Tackling challenges related to the understanding of educational resources
- Designed a contrastive pre-training method for holistically understanding mathematical questions (AAAI'2023)

Research Intern, Microsoft Research Asia — Jul. 2020 - Dec. 2020
Social Computing Group — Beijing, China
Mentor: Fangzhao Wu and Xing Xie

- Mainly worked on news recommendation and advertisement recommendation
- Implemented many advanced news recommendation methods

Undergraduate Research Assistant, University of Science and Technology of China — Mar. 2020 - Jul. 2020
Advisor: Qi Liu — Hefei, China

- Focused on federated learning and user modeling
- Worked on a hierarchical personalized federated user modeling framework (WWW'2021, TOIS)

PUBLICATIONS

1. **Yuting Ning**, Zhenya Huang, Enhong Chen, Shiwei Tong, Zheng Gong, Shijin Wang. Towards a Holistic Understanding of Mathematical Questions with Contrastive Pre-training. The 37th AAAI Conference on Artificial Intelligence (AAAI), 2023. [PDF] [Code]

2. **Yuting Ning**, Jiayu Liu, Longhu Qin, Tong Xiao, Shangzi Xue, Zhenya Huang, Qi Liu, Enhong Chen, Jinze Wu. A Novel Approach for Auto-Formulation of Optimization Problems. arXiv preprint, 2023. [PDF] [Code]

3. Qi Liu, Jinze Wu, Hao Wang, Zhenya Huang, **Yuting Ning**, Ming Chen, Enhong Chen. Federated User Modeling from Hierarchical Information. ACM Transactions on Information Systems (TOIS). 2022, accepted. [PDF]

4. Jinze Wu, Qi Liu, Zhenya Huang, **Yuting Ning**, Hao Wang, Enhong Chen, Jinfeng Yi and Bowen Zhou, Hierarchical Personalized Federated Learning for User Modeling, The 30th International World Wide Web Conference (WWW), 2021. [PDF]

5. **Yuting Ning**, Ye Liu, Zhenya Huang, Haoyang Bi, Qi Liu, Enhong Chen, Dan Zhang, Stable and Diverse: A Unified Approach for Computerized Adaptive Testing, 2021 IEEE 7th International Conference on Cloud Computing and Intelligent Systems (CCIS), 2021. [PDF]

COMPETITION EXPERIENCE

- **3rd place in NeurIPS Competition: Natural Language for Optimizing Modeling** [Web] 2022
- **Silver Prize (top 5%) in Kaggle: Feedback Prize - Evaluating Student Writing** [Web] 2022
- **2rd place in MOOCCube Competition: Predicting Student Performances** 2021

PROJECTS

EduNLP [Code], [Doc] Sep. 2021 - Present

EduNLP is a library for advanced Natural Language Processing towards multi-modal educational items.

- Work as a team leader and organize the project
- Implement many educational question representation models (e.g., QuesNet)
- Build the EduNLP modelhub for pre-trained model management
- Implement several downstream tasks with pre-trained models (e.g., similarity prediction)

LUNA [Web] Feb. 2021 - Present

Intelligent Educational Knowledge Graph (LUNA) aims to analyze massive educational resources deeply and provide intelligent education services.

- Implement question search service
- Introduce the pre-trained question representation models to boost question-based downstream tasks

News Recommendation [Code(Keras)], [Code(PyTorch)] Jun. 2020 - Jul. 2020

Implemented several news recommendation methods with MIND dataset (e.g., NAML) in both PyTorch and Keras.

PRESENTATIONS

- **AAAI 2023**, Online Feb. 2023
  Towards a Holistic Understanding of Mathematical Questions with Contrastive Pre-training
- **NeurIPS 2022 NL4Opt competition workshop**, Online Dec. 2022
  A Novel Approach for Auto-Formulation of Optimization Problems
- **CCIS 2021**, Online Nov. 2021
  Stable and Diverse: A Unified Approach for Computerized Adaptive Testing

TEACHING EXPERIENCE

Machine Learning and Knowledge Discovery Sep. 2022 - Feb. 2023

Teaching assistant, University of Science and Technology of China

SELECTED HONORS & AWARDS

First Prize Academic Scholarship, University of Science and Technology of China 2022, 2023
Top 5% Outstanding Graduates of USTC, University of Science and Technology of China 2021
Outstanding Graduates of Anhui Province, Education Department of Anhui Province 2021
Baosteel Outstanding Student Scholarship (1/1800+ in USTC), Baosteel Education Fund 2020
National Scholarship, Ministry of Education of the People's Republic of China 2019
Gold Award for Outstanding Student Scholarship, University of Science and Technology of China 2018

SKILLS

Programming Languages Python, C, SQL, HTML
Frameworks Pytorch, Keras, Flask
Tools LaTeX, Git
Languages Mandarin (native), English (TOEFL: 102)