

Yue, Zhenrui

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Education

University of Illinois Urbana-Champaign

Ph.D. in Cognitive Science & Language Processing

Champaign, IL

Aug 2021 – Present

- Research Interests: Natural Language Processing, Recommender Systems & Information Retrieval
- Courses: Advanced NLP, ML Security & Privacy, Deep Gen. & Dyn. Models, Math Models of Language, Computer Vision etc.

Technische Universität München

M.Sc. in Robotics, Cognition, Intelligence

Munich, Germany

Apr 2019 – May 2021

- Exchange Year (2019 - 2020) at UC San Diego with Max Weber Scholarship
- Courses: Intro to AI, Machine Learning, Deep Learning, Cognitive System, Multiple View Geometry, Robotics, Motion Planning etc.

Technische Universität München

B.Sc. in Mechanical Engineering

Munich, Germany

Oct 2015 – Mar 2019

- Track: Mechatronics and Information Technology
- Courses: Mathematics, Mechanics, Control Theory, Simulation, Intro to CS, Software Engineering, Algo & Data Structures etc.

Experience

University of Illinois Urbana-Champaign

Research / Teaching Assistant

Champaign, IL

Aug 2021 – Present

- Proposed novel methods, performed experiments and prepared publications for machine learning and AI research
- Assisted in the teaching and coordination of multiple courses, provided academic support to individual students

Google Deepmind

Student Researcher

Mountain View, CA

May 2024 – Present

- Conduct research in retrieval augmented generation (RAG) with Gemini models, experiment and evaluate existing methods
- Propose and implement novel scaling methods for long-context RAG to improve performance on knowledge-intensive tasks

NVIDIA

Research Intern

Remote, IL

May 2023 – Aug 2023

- Engaged in research on recommender systems, conduct experiments and evaluate the performance of current approaches
- Designed and implemented large language model-based re-ranking (LlamaRec) for preference understanding and recommendation

Siemens

Software Intern

Munich, Germany

Dec 2018 – Sep 2019

- Developed a web crawler to extract online product specs and a purchasing database with access interface
- Implemented a purchasing process application for product selection, entry filtering and order document generation

Selected Publication

LlavaRec: Sequential Recommendation with Large Multimodal Models

- **Zhenrui Yue**, Huimin Zeng, Yueqi Wang, Julian McAuley, Dong Wang
- *In Submission*

Inference Scaling for Long-Context Retrieval Augmented Generation

- **Zhenrui Yue***, Honglei Zhuang*, Aijun Bai, Kai Hui, Rolf Jagerman, Hansi Zeng, Zhen Qin, Dong Wang, Xuanhui Wang, Michael Bendersky
- *Technical Report*

Retrieval Augmented Fact Verification by Synthesizing Contrastive Arguments

- **Zhenrui Yue**, Huimin Zeng, Lanyu Shang, Yifan Liu, Yang Zhang, Dong Wang
- *ACL 2024*

Open-Vocabulary Federated Learning with Multimodal Prototyping

- Huimin Zeng, **Zhenrui Yue**, Dong Wang
- *NAACL 2024*

Linear Recurrent Units for Sequential Recommendation

- **Zhenrui Yue***, Yueqi Wang*, Zhankui He, Huimin Zeng, Julian McAuley, Dong Wang

- WSDM 2024

LlamaRec: Two-Stage Recommendation using Large Language Models for Ranking

- Zhenrui Yue, Sara Rabhi, Gabriel Moreira, Dong Wang, Even Oldridge
- PGAI@CIKM 2023

Manipulating Out-Domain Uncertainty Estimation in Deep Neural Networks via Targeted Clean-Label Poisoning

- Huimin Zeng, Zhenrui Yue, Yang Zhang, Lanyu Shang, Dong Wang
- CIKM 2023

Zero- and Few-Shot Event Detection via Prompt-Based Meta Learning

- Zhenrui Yue, Huimin Zeng, Mengfei Lan, Heng Ji, Dong Wang
- ACL 2023

MetaAdapt: Domain Adaptive Few-Shot Misinformation Detection via Meta Learning

- Zhenrui Yue, Huimin Zeng, Yang Zhang, Lanyu Shang, Dong Wang
- ACL 2023

Contrastive Domain Adaptation for Early Misinformation Detection: A Case Study on COVID-19

- Zhenrui Yue, Huimin Zeng, Ziyi Kou, Lanyu Shang, Dong Wang
- CIKM 2022

On Attacking Out-Domain Uncertainty Estimation in Deep Neural Networks

- Huimin Zeng, Zhenrui Yue, Yang Zhang, Ziyi Kou, Lanyu Shang, Dong Wang
- IJCAI 2022

Domain Adaptation for Question Answering via Question Classification

- Zhenrui Yue, Huimin Zeng, Ziyi Kou, Lanyu Shang, Dong Wang
- COLING 2022

Defending Substitution-Based Profile Pollution Attacks on Sequential Recommenders

- Zhenrui Yue, Huimin Zeng, Ziyi Kou, Lanyu Shang, Dong Wang
- RecSys 2022

Contrastive Domain Adaptation for Question Answering using Limited Text Corpora

- Zhenrui Yue, Bernhard Kratzwald, Stefan Feuerriegel
- EMNLP 2021

Black-Box Attacks on Sequential Recommenders via Data-Free Model Extraction

- Zhenrui Yue*, Zhankui He*, Huimin Zeng, Julian McAuley
- RecSys 2021

Teaching

University of Illinois Urbana-Champaign

IS 496: Computer Networks

IS 327: Concepts of Machine Learning

IS 206: Introduction to Database

IS 203: Analytical Fndts Info Problems

Champaign, IL

Spring 2024

Fall 2023

Fall 2022

Spring 2022

Awards

SIGIR & RecSys Travel Award

2022

Bosch IoT Scholarship

2021

E-fellows.net Scholarship

2020

Max Weber Academic Exchange Scholarship

2019

Audi Campus Ambassador Scholarship

2018

Max Weber Program Scholarship

2017

Shiyu Scholarship

2016

Miscellaneous

Languages: Native in Mandarin and Cantonese, proficient in English and German, beginner in Spanish

Coding: Python, C/C++; experiences with PyTorch, Jax, TensorFlow, Docker, Git, Bash, AWS, Google Cloud

Review: AAAI 2023 - 2025, ARR 2023 - 2025 (ACL, EMNLP, NAACL etc.), WWW 2024 - 2025, ICLR 2025, ASONAM 2023 - 2024, COLING 2022, ACM TIST, ACM TKDD, IEEE SmartGrid, IEEE TBD, etc.