

# Xinyu Ma

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## CONTACT INFORMATION

E-mail: xinyuma2016@gmail.com  
Web: <https://albert-ma.github.io>

## EDUCATION

**Chinese Academy of Sciences**, Beijing, China **2017.9 - 2023.1**

Ph.D., Institute of Computing Technology  
Topic: Information Retrieval  
Advisor: Jiafeng Guo

**Shandong University**, Jinan, Shandong, China **2013.9 - 2017.7**

B.S., Software Engineering  
GPA Top 1%

## WORK EXPERIENCE

**Baidu, Beijing, China**

*Research engineer at Baidu Search*

**2023.2 - present**

- Now working on developing large language model-based query response generation, including answer generation for simple questions and search result summarization for fuzzy queries
- Worked on developing language model-based ranking models for Baidu core search engine for about 1.5 years
- **The 1st place on the BRIGHT leaderboard** using ReasonRank on Aug.9, 2025
- **EMNLP 2023 Outstanding Paper Award** for the paper entitled “Is Chat-GPT Good at Search? Investigating Large Language Models as Re-Ranking Agent”

**Ant Group, Beijing, China**

*Intern in Search Group*

**2022.8 - 2023.1**

- Worked on designing dense retrieval models for real e-commerce scenario

**Sina Weibo, Beijing, China**

*Intern in Machine Learning Group*

**2018.3 - 2018.9**

- Worked on neural architecture search optimized via RL

## BENCHMARK LEADERBOARD

**1st Place on MS MARCO Document Ranking Task** 2021.1, 2021.4

- We outperform THU-MSR, CMU, Stanford and other teams from different companies and universities, and reached the 1st place twice using PROP
- We are the first team to edge past eval MRR@100 of 0.4.

## HONORS AND AWARDS

**Beijing Outstanding Graduate**, 2023

**Special Award for the Director of the ICT**, 2021

**National Scholarship (Ph.D)**, 2021

**Outstanding Undergraduate Award from Shandong Province**, 2017

**National Scholarship (B.E.)**, 2016

## PUBLICATIONS

**TP-RAG: Benchmarking Retrieval-Augmented Large Language Model Agents for Spatiotemporal-Aware Travel Planning.** Hang Ni, Fan Liu, Xinyu Ma, Lixin

Su, Shuaiqiang Wang, Dawei Yin, Hui Xiong, Hao Liu. *The 2025 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2025

**CoRanking: Collaborative Ranking with Small and Large Ranking Agents.** Wenhan Liu, Xinyu Ma, Yutao Zhu, Lixin Su, Shuaiqiang Wang, Dawei Yin, Zhicheng Dou. *The 2025 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2025

**FULTR: A Large-Scale Fusion Learning to Rank Dataset and Its Application for Satisfaction-Oriented Ranking.** Yuchen Li, Hao Zhang, Haojie Zhang, Hengyi Cai, Xinyu Ma, Shuaiqiang Wang, Haoyi Xiong, Zhaochun Ren, Maarten de Rijke, Dawei Yin. *The 31st ACM SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)*, 2025

**M2oERank: Multi-Objective Mixture-of-Experts Enhanced Ranking for Satisfaction-Oriented Web Search.** Yuchen Li, Hao Zhang, Yongqi Zhang, Xinyu Ma, Wenwen Ye, Naifei Song, Shuaiqiang Wang, Haoyi Xiong, Dawei Yin, Lei Chen. *The 41st International Conference on Data Engineering (ICDE)*, 2025

**Replication and Exploration of Generative Retrieval over Dynamic Corpora.** Zhen Zhang, Xinyu Ma, Weiwei Sun, Pengjie Ren, Zhumin Chen, Shuaiqiang Wang, Dawei Yin, Maarten de Rijke, Zhaochun Ren. *The 48th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR)*, 2025

**Reproducibility, Replicability, and Insights into Visual Document Retrieval with Late Interaction.** Jingfen Qiao, Jia-Huei Ju, Xinyu Ma, Evangelos Kanoulas, Andrew Yates. *The 48th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR)*, 2025

**The Mirage of Model Editing: Revisiting Evaluation in the Wild.** Wanli Yang, Fei Sun, Jiajun Tan, Xinyu Ma, Qi Cao, Dawei Yin, Huawei Shen, Xueqi Cheng. *The 63rd Annual Meeting of the Association for Computational Linguistics (ACL)*, 2025

**Knowledge Graph Retrieval-Augmented Generation for LLM-based Recommendation.** Shijie Wang, Wenqi Fan, Yue Feng, Xinyu Ma, Shuaiqiang Wang, Dawei Yin. *The 63rd Annual Meeting of the Association for Computational Linguistics (ACL)*, 2025

**Sliding Windows Are Not the End: Exploring Full Ranking with Long-Context Large Language Models.** Wenhan Liu, Xinyu Ma, Yutao Zhu, Ziliang Zhao, Shuaiqiang Wang, Dawei Yin, Zhicheng Dou. *The 63rd Annual Meeting of the Association for Computational Linguistics (ACL)*, 2025

**Tourrank: Utilizing Large Language Models for Documents Ranking with a Tournament-inspired Strategy.** Yiqun Chen, Qi Liu, Yi Zhang, Weiwei Sun, Xinyu Ma, Wei Yang, Daiting Shi, Jiaxin Mao, Dawei Yin. *The 2025 ACM Web Conference (WWW)*, 2025

**MAIR: A Massive Benchmark for Evaluating Instructed Retrieval.** Weiwei Sun, Zhengliang Shi, Jiulong Wu, Lingyong Yan, Xinyu Ma, Yiding Liu, Min Cao, Dawei Yin, Zhaochun Ren. *The 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2024

**The Fall of ROME: Understanding the Collapse of LLMs in Model Editing.** Wanli Yang, Fei Sun, Jiajun Tan, Xinyu Ma, Du Su, Dawei Yin, Huawei Shen. *The 2024 Conference on Empirical Methods in Natural Language Processing (EMNLP, 2024)*

**The Butterfly Effect of Model Editing: Few Edits Can Trigger Large Language Models Collapse.** Wanli Yang, Fei Sun, Xinyu Ma, Xun Liu, Dawei Yin, Xueqi Cheng. *The 62nd Annual Meeting of the Association for Computational Linguistics (ACL), 2024*

**Instruction Distillation Makes Large Language Models Efficient Zero-shot Rankers.** Weiwei Sun, Zheng Chen, Xinyu Ma, Lingyong Yan, Shuaiqiang Wang, Pengjie Ren, Zhumin Chen, Dawei Yin, Zhaochun Ren. *GenRec Workshop of the 32nd ACM International Conference on Information and Knowledge Management (CIKM), 2023*

**Pre-training with Aspect-Content Text Mutual Prediction for Multi-Aspect Dense Retrieval.** Xiaojie Sun, Keping Bi, Jiafeng Guo, Xinyu Ma, Fan Yixing, Hongyu Shan, Qishen Zhang, Zhongyi Liu. *The 32nd ACM International Conference on Information and Knowledge Management (CIKM), 2023*

**Is ChatGPT Good at Search? Investigating Large Language Models as Re-Ranking Agent.** Weiwei Sun, Lingyong Yan, Xinyu Ma, Shuaiqiang Wang, Pengjie Ren, Zhumin Chen, Dawei Yin, Zhaochun Ren. *The 2023 Conference on Empirical Methods in Natural Language Processing (EMNLP) Outstanding Paper Award*

**Pre-training Methods in Information Retrieval** Yixing Fan\*, Xiaohui Xie\*, Yinqiong Cai, Jia Chen, Xinyu Ma, Xiangsheng Li, Ruqing Zhang, Jiafeng Guo. *Foundations and Trends in Information Retrieval (FnTIR)*

**A Contrastive Pre-training Approach to Discriminative Autoencoder for Dense Retrieval.** Xinyu Ma, Ruqing Zhang, Jiafeng Guo, Yixing Fan, Xueqi Cheng. *The 31st ACM International Conference on Information and Knowledge Management (CIKM), 2022*

**Scattered or Connected? An Optimized Parameter-efficient Tuning Approach for Information Retrieval.** Xinyu Ma, Jiafeng Guo, Ruqing Zhang, Yixing Fan, Xueqi Cheng. *The 31st ACM International Conference on Information and Knowledge Management (CIKM), 2022*

**A Linguistic Study on Relevance Modeling in Information Retrieval.** Yixin Fan, Jiafeng Guo, Xinyu Ma, Ruqing Zhang, Yanyan Lan, Xueqi Cheng. *The Web Conference 2021 (WWW), 2021*

**Pre-train a Discriminative Text Encoder for Dense Retrieval via Contrastive Span Prediction.** Xinyu Ma, Jiafeng Guo, Ruqing Zhang, Yixing Fan, Xueqi Cheng. *The 45th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR), 2022*

**Pre-train a Discriminative Text Encoder for Dense Retrieval via Contrastive Span Prediction.** Xinyu Ma, Jiafeng Guo, Ruqing Zhang, Yixing Fan, Xueqi Cheng. *The 45th International ACM SIGIR Conference on Research and Development in Information Retrieval (SIGIR), 2022*

**B-PROP: Bootstrapped Pre-training with Representative Words Prediction**

**for Ad-hoc Retrieval.** Xinyu Ma, Jiafeng Guo, Ruqing Zhang, Yixing Fan, Yingyan Li, Xueqi Cheng. *The 44th International ACM SIGIR Conference on Research and Development in Information Retrieval (**SIGIR**)*, 2021

**PROP: Pre-training with Representative Words Prediction for Ad-hoc Retrieval.** Xinyu Ma, Jiafeng Guo, Ruqing Zhang, Yixing Fan, Xiang Ji, Xueqi Cheng. *The 14th ACM International Conference on Web Search and Data Mining (**WSDM**)*, 2021