

Xi Wang

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Research Interests

- **Conversational Systems development:** building effective conversational models for natural language understanding and natural language response for downstream conversational recommendation and task-oriented assistant scenarios.
- **Information Retrieval:** leveraging appropriate models or techniques to identify relevant entities to a given query (i.e. document retrieval) or a given user (i.e. recommendation system). Pattern recognition, feature engineering, text mining, multi-modal representations and neural network techniques are involved in boosting retrieval performance.
- **Fairness and Bias Analysis:** developing systematic fairness and bias evaluation approaches to reveal the hidden bias factors across various human-interaction systems, including conversational recommendation systems and task-oriented dialogue systems.
- **Heterogeneous Feature Representation:** involving various techniques to effectively represent the learned features from input (e.g. users' posted reviews, user-item interactions, query-document pairs) for down-streaming tasks.

Education

- **University of Glasgow** **Glasgow, UK**
Ph.D. in Computer Science, Supervisor: Iadh Ounis, Craig Macdonald *June 2022*
- **University of Glasgow** **Glasgow, UK**
M.sc. in Data Science, *September 2017*
- **University of Zhengzhou** **Zhengzhou, China**
B.Sc. in Computer Science and Technique, *June 2016*

Work Experience

- **WI Group at UCL** **London, UK**
Research Fellow, Adviser: Emine Yilmaz *June 2022 - Now*
Work on a various task-oriented conversational tasks and develop cutting edge techniques in improving the performance of existing conversational models. Corresponding outcomes published at AAAI 2023, ACL 2023 and EMNLP 2022-2023.
- **NAVER LABs Europe** **Grenoble, France**
Research Intern, Adviser: Jean-Michel Renders, Thibaut Thonet *October 2019 - February 2020*
Work on a recommendation system-based project that modelled users' preferences from both users' search queries in Korean and their historical interactions.

Teaching Experience

- **University College London** **Invited Lecture**
COMP0084: Information Retrieval and Data Mining, UCL *23-Mar-2023*
- **University of Oklahoma** **Invited Lecture**
Evaluating Interactive Information Systems with Users *01-Oct-2022*

- **University of Glasgow** **Level 4 / Master Student Supervision**
Information Retrieval 2019-2021
- **University Colledge London** **Master Student Supervision**
The Power of Pretrained Language Models in Viral Content Generation 2022
- **University of Glasgow** **Lab Tutor**
Information Retrieval 2021

Invited Talks

1. **Sun Yat-Sen University** **Guangzhou, China**
Review-based Recommendation System: Effectiveness and Explainability 19-Dec-2020
2. **Royal Melbourne Institute of Technology (RMIT) University** **Virtual**
Personalised Usefulness of Reviews for Effective Recommendation 08-July-2021
3. **CIKM LLMIT workshop** **Birmingham, UK**
Enhancing Conversational Technique: the role of synthetic dialogue generation 22-Oct-2023
4. **University of Glasgow** **Glasgow, UK**
Enhancing Conversational Technique: the role of synthetic dialogue generation 23-Oct-2023

Publications

Publications (ranked by significance)

1. **Xi Wang**, Iadh Ounis, and Craig Macdonald. Leveraging Review Properties for Effective Recommendation. *WebConf 2021*. (Core A*) [\[link\]](#)
2. **Xi Wang**, Iadh Ounis, and Craig Macdonald. 2020. Negative Confidence-Aware Weakly Supervised Binary Classification for Effective Review Helpfulness Classification. *CIKM 2020*. (Core A) [\[link\]](#)
3. **Xi Wang**, Iadh Ounis, Craig Macdonald. BanditProp: Bandit Selection of Review Properties for Effective Recommendation. *ACM Transactions on the Web (IF 2.043)*. [\[link\]](#)
4. **Xi Wang**, Hossein A. Rahmani, Jiqun Liu, Emine Yilmaz. Improving Conversational Recommendation Systems via Bias Analysis and Language-Model-Enhanced Data Augmentation. *EMNLP 2023 (Core A*)*
5. Hossein A. Rahmani[†], **Xi Wang**[†], Yue Feng, Qiang Zhang, Emine Yilmaz and Aldo Lipani. A Survey on Asking Clarification Questions Datasets in Conversational Systems *ACL main 2023*. (Core A*)[\[link\]](#)
6. Zaiqiao Meng, Richard McCreddie, **Xi Wang**, Craig Macdonald, Iadh Ounis, and others, BETA-Rec: Build, Evaluate and Tune Automated Recommender Systems. *ACM RecSys 2020*. (Core A) [\[link\]](#)
7. Procheta Sen[†], **Xi Wang**[†], Ruiqing Xu, and Emine Yilmaz. Task2KB: A Public Task-Oriented Knowledge Base. *AAAI 2023 (Core A*)* [\[link\]](#)
8. Zixuan Yi, **Xi Wang**, Iadh Ounis, Craig Macdonald. Multi-modal Graph Contrastive Learning for Micro-video Recommendation. *SIGIR 2022*. (Core A*) [\[link\]](#)
9. Fanghua Ye, **Xi Wang**, Jie Huang, Shenghui Li, Samuel Stern and Emine Yilmaz. MetaASSIST: Robust Dialogue State Tracking with Meta Learning. *EMNLP main 2022*. (Core A) [\[link\]](#)
10. **Xi Wang**, Iadh Ounis, and Craig Macdonald. Effective Rating Prediction using an Attention-based User Review Sentiment Model. *ECIR 2022*. (Core A) [\[link\]](#)
11. **Xi Wang**, Anjie Fang, Iadh Ounis, and Craig Macdonald. Evaluating Similarity Metrics for Latent Twitter Topics. *ECIR 2019*. (Core A) [\[link\]](#)
12. **Xi Wang**, Iadh Ounis, and Craig Macdonald. Comparison of Sentiment Analysis and User Ratings in Venue Recommendation. *ECIR 2019*. (Core A) [\[link\]](#)
13. Zhengxiang Shi, Jerome Ramos, To Eum Kim, **Xi Wang**, Hossein A Rahmani, and Aldo Lipani.

When and what to ask through world states and text instructions: Iglu nlp challenge solution. *IGLU NeurIPS Workshop 2022*.

14. Ting su, **Xi Wang**, Craig Macdonald and Iadh Ounis. University of Glasgow Terrier Team at the TREC 2019 Deep Learning Track. *TREC 2019*.
15. Xiao Wang, Yaxiong Wu, **Xi Wang**, Craig Macdonald and Iadh Ounis. University of Glasgow Terrier Team at the TREC 2020 Deep Learning Track. *TREC 2020*.

†: co-first authored.

Software

- **Beta-RecSys** **Main contributor**
Build, Evaluate and Tune Automated Recommender Systems *Github Open Source Project*
 - Build the core framework.
 - Manage a team with 11 members on maintaining the project.
 - Implement more than 15 recommendation models and integrate more than 20 datasets .
 - Contain various features, including hyper-parameter tuning, unified PyTorch core engine and unified training, validation, tuning and testing pipeline.

Awards

- Co-recipient of Google research workshop grant on Action, Task and User Journey (\$20,000), together with Prof. Emine Yilmaz.
- Bronze Award of National Lan Qiao Programming Competition in 2013
- Goal Medal of the Provincial ACM-ICPC International Collegiate Programming Contest (2015 Henan Province Region)

Professional Activities

Conference (Senior) Program Committee & Journal Review.....

- SIGIR *2022-Present*
- CIKM (SPC) *2023*
- ECIR *2021-Present*
- RecSys *2021,2022*
- WWW *2022-Present*
- WSDM *2023*
- Transactions on Information Systems (TOIS) *2022*
- Transactions on Knowledge and Data Engineering (TKDE) *2022*
- Transactions on Recommender Systems (TORS) *2023*

External Reviewer.....

- AAAI *2020,2021*
- WWW *2021*
- SIGIR *2021*
- SIGKDD *2021*