

Hossein A. (Saeed) Rahmani

Web Intelligence Group (WI)
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Research Interests

Large Language Models, Personalisation, Recommender Systems, Information Retrieval, Responsible IR

Education

University College London (UCL), London, UK

Dec. 2022 - Nov. 2026 (*expected*)

Ph.D. in Computer Science

Thesis: Responsible IR, Conversational System, Large Language Model

Supervisors: Prof. Emine Yilmaz and Nick Craswell

University of Zanjan, Zanjan, Iran

Sep. 2016 - Feb. 2020

M.Sc. in Computer Engineering, GPA: 18.04/20

Thesis: Context-aware Point-of-Interest Recommender System (Graded: 20/20)

Supervisors: Prof. Mohsen Afsharchi and Dr. Mitra Baratchi

Selected Research Experiences

Research Assistant

Nov. 2022 - current

Web Intelligence Group (WI), University College London (UCL)

Topics: Personalizing Large Language Models and Responsibility

Supervisors: Prof. Emine Yilmaz and Nick Craswell

Research Scientist (Part-time)

Sep. 2023 - current

Thomson Reuters (TR Labs), London, UK

Topics: Utilizing the Capabilities and Responsibilities of LLMs for Automatic Evaluation

Visiting Researcher

Sep. 2019 - Dec. 2019

Information Retrieval Group

Faculty of Informatics, Università della Svizzera italiana (USI)

Project: Joint Geographical and Temporal Point-of-Interest Recommender System

Supervisor: Prof. Fabio Crestani

Selected Publications (Full list: Google Scholar)

- Zahra Abbasiantaeb, Chuan Meng, David Rau, Antonis Krasakis, [Hossein A. Rahmani](#), Mohammad Aliannejadi. **LLM-based Retrieval and Generation for Conversational Search (iKAT)**, TREC, 2023.
- Nick Craswell, Bhaskar Mitra, Emine Yilmaz, [Hossein A. Rahmani](#), Daniel Campos, Jimmy Lin, Ellen M. Voorhees, Ian Soboroff. **Overview of The TREC 2023 Deep Learning Track**, TREC, 2023.
- [Hossein A. Rahmani](#), Mohammadmehdi Naghiaei, Yashar Deldjoo. **A Personalised Framework for Consumer and Producer Group Fairness Optimization in Recommender Systems**, ACM Transactions on Recommender Systems (TORS), 2023. (Under Review)
- Xi Wang, [Hossein A. Rahmani](#), Jiqun Liu, Emine Yilmaz. **Improving Conversational Recommendation Systems via Bias Analysis and Language-Model-Enhanced Data Augmentation**, EMNLP, 2023.
- Laura Ruis, Arduin Findeis, Herbie Bradley, [Hossein A. Rahmani](#), Kyoung Whan Choe, Edward Grefenstette, Tim Rocktäschel. **Do LLMs Selectively Encode the Goal of an Agent's Reach?**. TOM@ICML, 2023.
- [Hossein A. Rahmani](#), Xi Wang, Yue Feng, Qiang Zhang, Emine Yilmaz, Aldo Lipani. **A Survey on Asking Clarification Questions Datasets in Conversational Systems**, ACL, 2023.
- Zhengxiang Shi, Jerome Ramos, To Eun Kim, Xi Wang, [Hossein A. Rahmani](#), Aldo Lipani. **When and What to Ask Through World States and Text Instructions: IGLU NLP Challenge Solution**, IGLU@NeurIPS, 2023.
- Mohammadmehdi Naghiaei, [Hossein A. Rahmani](#), Mohammad Aliannejadi, Nasim Sonboli. **Towards Confidence-aware Calibrated Recommendation**, CIKM, 2022.

- Hossein A. Rahmani, Mohammadmehdi Naghiaei, Ali Tourani, Yashar Deldjoo. **Exploring the Impact of Temporal Bias in Point-of-Interest Recommendation**, RecSys, 2022.
- Hossein A. Rahmani, Yashar Deldjoo, Tommaso Di Noia. **The Role of Context Fusion on Accuracy, Beyond-Accuracy, and Fairness of Point-of-Interest Recommendation Systems**, Expert Systems with Applications (ESWA), 2022.
- Hossein A. Rahmani, Mohammadmehdi Naghiaei, Mahdi Dehghan, Mohammad Aliannejadi. **Experiments on Generalizability of User-Oriented Fairness in Recommender Systems**, SIGIR, 2022.
- Mohammadmehdi Naghiaei, Hossein A. Rahmani, Yashar Deldjoo. **CPFair: Personalized Consumer and Producer Fairness Re-ranking for Recommender Systems**, SIGIR, 2022.
- Hossein A. Rahmani, Mohammad Aliannejadi, Mitra Baratchi, Fabio Crestani. **Systematic Analysis on the Impact of Contextual Information on Point-of-Interest Recommendation**, ACM Transactions on Information Systems (TOIS), 2021.
- Hossein A. Rahmani, Mohammad Aliannejadi, Mitra Baratchi, Fabio Crestani. **Joint Geographical and Temporal Modeling based on Matrix Factorization for Point-of-Interest Recommendation**, ECIR, 2020.
- Hossein A. Rahmani, Mohammad Aliannejadi, Rasoul Mirzaei Zadeh, Mitra Baratchi, Mohsen Afsharchi, Fabio Crestani. **Category-Aware Location Embedding for Point-of-Interest Recommendation**, ICTIR, 2019.

Honors and Awards

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| • Ranked 1st in TREC iKAT 2023, LLMs for Conversational Search | 2023 |
| • Research Prize, IGLU Challenge, NeurIPS 2022 Competitions | 2023 |
| • UCL PhD Studentship, UKRI CDT in Foundational AI, UCL, UK | 2022 |
| • School of Artificial Intelligence Scholarship, School of AI, Pi School, Italy | 2021 |
| • Student Registration Grant for attending CSCW | 2021 |
| • Student Registration Grant for attending CIKM | 2021 |
| • Third-rank Graduate Amongst MSc Students, University of Zanjan, Iran | 2020 |
| • Student Registration and Travel Grant for attending MediaEval Benchmark, EUROCOM, France | 2019 |
| • Student Registration Grant for attending CLEF, Università della Svizzera italiana, Switzerland | 2019 |
| • Selected for the Mobility Grant, Zurich University of Applied Sciences (ZHAW), Switzerland | 2019 |
| • Selected for the Data Science Winter School, University of Bonn, Germany | 2018 |
| • Third-rank Graduate Amongst BSc Students, University of Zanjan, Iran | 2016 |
| • Ranked 3rd in Technical University Olympiad, Technical and Vocational University, Iran | 2013 |
| • Honorary Admission to Bachelor Program, Technical University of Shiraz, Iran | 2013 |

Organizational Activities

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| • Co-organizing the TREC Deep Learning Track 2023 (Synthetic Data Generation in Search) | Jul. 2023 - Nov. 2023 |
| • WITalk: WI Talk Series on NLP and IR, UCL AI Center, University College London | Oct. 2023 - current |
| • OUT+: Webinar Series, University of Zanjan, Iran | Oct. 2019 - Feb. 2020 |
| • OpenTalks in Computer Engineering, University of Zanjan, Iran | Dec. 2018 - Jul. 2019 |

Work Experiences

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| • Research and Development, Virtual Manufacturing Inc., USA | Oct. 2021 - Nov. 2022 |
| • Machine Learning Engineer, TVConal, Singapore | Jul. 2021 - Oct. 2021 |
| • Research Scholar, Pi School, Italy | Apr. 2021 - Jun. 2021 |
| • Data Scientist, Sanay Co., Iran | Apr. 2020 - Jan. 2021 |

Projects

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| • Multi-modal Task-based Dialogue Systems <i>Amazon Alexa Prize TaskBot Challenge (Team Condit)</i> Web Intelligence Group, University College London, UK | Aug. 2021 - Nov. 2022 |
| • Finding Key Opinion Leaders in Medical Specialties Pi School, Rome, Italy | Apr. 2021 - Jul. 2021 |

Academic Services

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| • Program Committee: ICTIR'23, RecSys'23, SIGIR'23, ESWAF'23, ECIR'22 | |
| • Conference Reviewer: ECIR'24, EMNLP'22, WSDM'21, ECML/PKDD'21, ECIR'21, SIGIR'20, ICMF'19 | |
| • Student Volunteer: CLEF'19 | |
| • MSc. Thesis Co-supervision, University of Zanjan, Iran | Feb. 2020 - Sep. 2020 |
| • External Collaborator on Course Development, Leiden University, The Netherlands | Jan. 2019 - Jun. 2019 |

Teaching Experiences

- **Teaching Assistant**, University College London (UCL)
 - Information Retrieval and Data Mining (COMP0084), MSc Winter 2023
 - Artificial Intelligence for Sustainable Development (COMP0173), MSc Fall 2023
 - Foundation of Artificial Intelligence (COMP0186), MSc Winter 2023
- **Teaching Assistant**, University of Zanjan
 - Artificial Intelligence, BSc Spring 2019
 - Software Engineering, BSc Spring 2016, Fall 2018
 - Big Data, MSc Spring 2016
 - Scientific and Technical Presentation, BSc Spring 2015
 - Advanced Programming, BSc Spring 2015
 - Introduction to Programming, BSc Spring 2014
- **Teaching Assistant**, The Institute for Advanced Studies in Basic Sciences (IASBS)
 - Software Engineering I, BSc Fall 2016
 - Software Engineering II, BSc Winter 2017
 - Software Engineering III, BSc Spring 2017

Invited Talks

- **Fairness and Bias in Recommender Systems**, QIAU, Iran 2023
- **Generability of User Fairness in Recommender Systems**, Mila x Vector Institute, Canada 2023
- **Personalized Context-Aware POI Recommendation**, Università della Svizzera italiana, Switzerland 2019

Skills

- **Programming Languages:** Python, Java, C#
- **Tools:** TensorFlow, Keras, NumPy, SciPy, Pandas, Seaborn, NLTK, Matplotlib, Flask, RESTful API
- **Database Systems:** MS SQL Server, MySQL, SQLite, MongoDB
- **Soft Skills:** Time Management, Team working, Problem-solving, Fast-Learning
- **Languages:** Persian (Native), Tabari (Fluent), English (Proficient), Arabic (Familiar)

References

Upon request.