


Negar Arabzadeh

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EDUCATION

CURRENT	PhD Candidate in Computer Science, GPA: 93/100 University of Waterloo, Canada Supervisor: Dr. Charles L. A. Clarke
WINTER 2021	Thesis: Evaluation of Interactive Intelligent Systems in Generative Era
FALL 2019	Master of Applied Science in Electrical and Computer Engineering, GPA: 4.0/4.0 Toronto Metropolitan University, Canada, Supervisor: Dr. Ebrahim Bagheri
FALL 2017	Thesis: “ Neural Embedding-based Specificity Metrics for Query Performance Prediction ”
SPRING 2017	Bachelor of Science in Electrical Engineering (Control Systems), GPA: 78/100 Amirkabir University of Technology (Tehran Polytechnic), Iran
FALL 2012	Thesis: “ Design and implementation of intelligent shopping cart ”

RESEARCH INTERESTS

Information Retrieval	Conversational Search
Natural Language Processing	Responsible AI

INTERNSHIPS AND RESEARCH EXPERIENCE

FALL 2023	Research Intern at Microsoft Research (MSR) Conducting research on evaluation of LLM-based multi-agent systems Mentors: Julia Kiseleva , Ahmed H. Awadallah
FALL 2022	Student Researcher at Google Brain Conducting research on offline evaluation of text-to-image generation models Mentor: Fernando Diaz
WINTER 2023	Organizer of NeurIPS 2022 IGLU Competition Coordinating NLP task on Interactive Grounded Language Understanding within Collaborative Environments (IGLU). With the focus on when and what clarifying questions should intelligent systems ask when collaborating with humans. Managing end-to-end processes, including human-annotated data curation, task design and evaluation formulation, attracting 30+ group of participants, etc.
SPRING 2022	
FALL 2022	Research Scientist at Spotify Research Conducting research on offline evaluation of instant Search Mentors: Ben Carterette , Claudia Hauff
WINTER 2022	
SUMMER 2021	Research Scientist Intern at Microsoft Research (MSR) Conducting research on interactive user guidance on meeting exploration by generating and organizing questions from meetings in hierarchical structure as a questionnaire Mentors: Julia Kiseleva , Ahmed H. Awadallah , Milad Shokouhi

AWARDS AND HONORS

2024	Honourable mention paper at 46th European Conference on Information Retrieval (ECIR 2024)
2023	Honoured to be invited to author a book for Foundations and Trends in Information Retrieval (FNTIR) on Gender bias in Information Retrieval (on going) Distinguished Referee at ACM International Conference on Information and Knowledge Management (CIKM 2023) David R. Cheriton graduate scholarship for scholastic excellence (20,000 CAD) SIGIR 2023 student travel award Talent travel bursary for Canadian AI conference 2023
2022	Best paper award at the 44th European Conference on Information Retrieval (ECIR 2022) Talent Travel bursary for Alberta Machine Intelligence Institute (Amii) AI Week
2021	Honoured to receive returning offer for Microsoft Research summer internship [Declined] Best Reviewer Award at ACM International Conference on Information and Knowledge Management (CIKM 2021) Provost doctoral entrance award for women at the university of Waterloo (5,000 CAD) University of Waterloo entrance scholarship (5,000 CAD)
2019	Runner-up in SOSCIP 3-Minute thesis competition at Advance Ontario
2017	Ryerson graduate development award (10,000 CAD)
2012	Granted exemption from the university entrance exam for B.Sc STEM majors due to outstanding achievements in robotic competitions.
2011	1st place at 3rd Khwarizmi International Award at junior soccer robots league
2010	Qualified and participated in 15th Robocup competition at junior soccer league 1st place at 5th International IranOpen competition at junior soccer robots league
2009	1st place at 1st International AUT cup competition at pathfinder robots league
2008	Placed among 0.5% accepted students out of 60,000 participants in the NODET (National Organization for Development of Exceptional Talents)

TUTORIALS

ECIR 2024	Query Performance Prediction: From Fundamentals to Advanced Techniques Arabzadeh, N. Meng, C. Aliannejadi M. and Bagheri, E.
WSDM 2023	Preference-Based Offline Evaluation Clarke, C. Diaz, F. and Arabzadeh, N.
ECIR 2023	Understanding and Mitigating Gender Bias in Information Retrieval Systems Bigdeli, A. Arabzadeh, N. Seyedsalehi, S. Zihayat, M. and Bagheri, E.
SIGIR 2022	Gender Fairness in Information Retrieval Systems Bigdeli, A. Arabzadeh, N. Seyedsalehi, S. Zihayat, M. and Bagheri, E.

SKILLS

TOOLS	TensorFlow, PyTorch, Large Language Models, Transformers. Docker, Google Cloud Platform , BigQuery
PROGRAMMING	Python, R, C++ , SQL, MongoDB, Assembly, HTML
SOFTWARE	MATLAB , Kinect Image processing, Proteus, Altium Designer , SolidWorks
HARDWARE	ARM, AVR, Arduino Boards

PUBLICATIONS

- EACL 2024 [Fréchet Distance for Offline Evaluation of Information Retrieval Systems with Sparse Labels.](#) **Arabzadeh, N.** and Clarke, C. In 18th Conference of the European Chapter of the Association for Computational Linguistics.
- ECIR 2024 [LaQuE: Enabling Entity Search at Scale.](#) **Arabzadeh, N.** Bigdeli, A. and Bagheri E. In 46th European Conference on Information Retrieval.
- ECIR 2024 [Adapting Standard Retrieval Benchmarks to Evaluate Generated Answers.](#) **Arabzadeh, N.** Bigdeli, A and Clarke, C. In 46th European Conference on Information Retrieval.
- ECIR 2024 [Context-Aware Query Term Difficulty Estimation for Performance Prediction.](#) Saleminezhad, A. **Arabzadeh, N.** Bagheri, E. and Beheshti S. In 46th European Conference on Information Retrieval.
- ECIR 2024 [Estimating Query Performance Through Rich Contextualized Query Representations.](#) Ebrahimi, S. **Arabzadeh, N.** Zarrinkalam, F. and Bagheri, E. In 46th European Conference on Information Retrieval.
- ECIR 2024 [BertPE: A BERT-Based Pre-retrieval Estimator for Query Performance Prediction.](#) Khodabakhsh, M. Zarrinlakam, F. and **Arabzadeh, N.** In 46th European Conference on Information Retrieval.
- ECIR 2024 [KnowFIRES: A Knowledge-Graph Framework for Interpreting Retrieved Entities from Search.](#) **Arabzadeh, N.** Golzadeh, K. Risi, C. Clarke, C. and Zhao J. In 46th European Conference on Information Retrieval.
- SIGIR 2024 [Ranked List Truncation: From Retrieval to Re-ranking](#) Meng, C. **Arabzadeh, N.** Askari, A. Aliannejadi, M. de Rijke, M. In 47th International ACM SIGIR Conference on Research and Development in Information Retrieval.
- EACL 2023 [PREME: Preference-based Meeting Exploration through an Interactive Questionnaire.](#) **Arabzadeh, N.** Ahmadvand, A. Kiseleva, J. Liu, Y. Awadallah, AH. Zhong, M. Shokouhi, M. In 17th Conference of the European Chapter of the Association for Computational Linguistics.
- CIKM 2023 [Noisy Perturbations for Estimating Query Difficulty in Dense Retrievers.](#) **Arabzadeh, N.** Hamidi Rad, R. Khodabakhsh, M. and Bagheri, E. In 32th ACM International Conference on Information and Knowledge Management
- CIKM 2023 [Neural Disentanglement of Query Difficulty and Semantics.](#) Salamat, S. **Arabzadeh, N.** Seyed-salehi, S. Bigdeli, A. Zihayat, M. and Bagheri, E. In 32th ACM International Conference on Information and Knowledge Management.
- SIGIR 2023 [Quantifying Ranker Coverage of Different Query Subspaces.](#) **Arabzadeh, N.** Bigdeli, A. Hamidi Rad, R. and Bagheri, E. In 46th International ACM SIGIR Conference on Research and Development in Information Retrieval.
- SIGIR 2023 [Query Performance Prediction: From Ad-hoc to Conversational Search.](#) Meng, C. **Arabzadeh, N.** Aliannejadi, M. de Rijke M. In 46th International ACM SIGIR Conference on Research and Development in Information Retrieval.
- SIGIR 2023 [A Preference Judgment Tool for Authoritative Assessment.](#) Seifikar, M. Nhi L. **Arabzadeh, N.** Smucker M. and Clarke C. In 46th International ACM SIGIR Conference on Research and Development in Information Retrieval.
- ICTIR 2023 [A is for Adele: An Offline Evaluation Metric for Instant Search.](#) **Arabzadeh, N.** Kmet, O. Carterette, B. Clarke C. Hauff, C. and Chandar, P. The 13th International Conference on the Theory of Information Retrieval.

- SIGIRAP 2023 [Retrieving Supporting Evidence for LLMs Generated Answers](#). Huo, S. **Arabzadeh, N.** and Clarke C. In 1st International ACM SIGIR Conference on Information Retrieval in the Asia Pacific.
- ECIR 2023 [Learning Query-Space Document Representations for High-Recall Retrieval](#). Salamat, S. **Arabzadeh, N.** Zarrinkalam, F. Zihayat, M. Bagheri, E. In 45th European Conference on Information Retrieval.
- ECIR 2023 [De-biasing Relevance Judgements for Fair Ranking](#). Bigdeli, A. **Arabzadeh, N.** Seyedsalehi, S. Zihayat, M. and Bagheri, E. In 45th European Conference on Information Retrieval.
- ECIR 2023 [Don't Raise Your Voice, Improve Your Argument: Learning to Retrieve Convincing Arguments](#). Salamat, S. **Arabzadeh, N.** Zarrinkalam, F. Zihayat, M. and Bagheri, E. In 45th European Conference on Information Retrieval.
- ECIR 2023 [Neural Ad-Hoc Retrieval Meets Open Information Extraction](#). Vo, D. Zarrinkalam, F. Pham, B. **Arabzadeh, N.**, Salamat, S. and Bagheri, E. In 45th European Conference on Information Retrieval.
- JBI 2023 [A self-supervised language model selection strategy for biomedical question answering](#). **Arabzadeh, N.** Bagheri, E. In Journal of Biomedical Informatics.
- Neurips 2022 [Interactive Grounded Language Understanding in a Collaborative Environment: Retrospective on Iglu 2022 Competition](#) Kiseleva, J. Skrynnik, A. Zholus, A. Mohanty, S. Arabzadeh, N. Côté, M. Aliannejadi, M. Teruel, M. Li, Z. Burtsev, M. ter Hoeve, M. Volovikova, Z. Panov, A. Sun, y. Srinet, K. Szlam, A. Awadallah, A. Rho, S. Kwon, T. Wontae Nam, D. Bivort Haiek, F. Zhang, E. Abdrazakov, L. Qingyam, G. Zhang, J. Guo, Z.
- InterNLP 2022 [Collecting Interactive Multi-modal Datasets for Grounded Language Understanding](#) Mohanty, S. Arabzadeh, N. Teruel, M. Sun, y. A. Zholus, A. Skrynnik, A. Burtsev, M. Srinet, K. Panov, A. Szlam, A. Côté, M. and Kiseleva, J.
- IRJ 2022 [Shallow pooling for sparse labels](#). **Arabzadeh, N.** Vtyurina, A. Yan, X. and A. Clarke, C. In Information Retrieval Journal.
- CIKM 2022 [Unsupervised Question Clarity Prediction Through Retrieved Item Coherency](#). **Arabzadeh, N.** Seififar, M. Clarke, C. In 31th ACM International Conference on Information and Knowledge Management.
- CIKM 2022 [Early Stage Sparse Retrieval with Entity Linking](#). Shehata, D. **Arabzadeh, N.** Clarke, C. In 31th ACM International Conference on Information and Knowledge Management.
- SIGIR 2022 [Addressing Gender-related Performance Disparities in Neural Rankers](#). Seyedsalehi, S. **Arabzadeh, N.** Bigdeli, A. Zihayat, M. and Bagheri, E. In 45th International ACM SIGIR Conference on Research and Development in Information Retrieval.
- EDBT 2022 [Bias-aware Fair Neural Ranking for Addressing Stereotypical Gender Biases](#). Bigdeli, A. **Arabzadeh, N.** Seyedsalehi, S. Zihayat, M. and Bagheri, E. In 25th International Conference on Extending Database Technology.
- WebSci 2022 [On the Characteristics of Ranking-based Gender Bias Measures](#). Klasnja, A. **Arabzadeh, N.** Mehrvarz, M. and Bagheri, E. In 14th ACM Web science Conference.
- CIKM 2021 [Predicting Efficiency/Effectiveness Trade-offs for Sparse vs. Dense Retrieval Strategy Selection](#). **Arabzadeh, N.** Clarke, C. and Yan, X. In 30th ACM International Conference on Information and Knowledge Management.
- CIKM 2021 [BERT-QPP: Contextualized Pre-trained transformers for Query Performance Prediction](#). **Arabzadeh, N.** Khodabakhsh, M. and Bagheri, E. In 30th ACM International Conference on Information and Knowledge Management.

- CIKM 2021 [Matches Made in Heaven: Toolkit and Large-Scale Datasets for Supervised Query Reformulation](#). Arabzadeh, N. Bigdeli, A. Seyedsalehi, S. Zihayat, M. and Bagheri, E. In 30th ACM International Conference on Information and Knowledge Management.
- CIKM 2021 [MS Marco Chameleons: Challenging the MSMarco Leaderboard with Extremely Obstinate Queries](#). Arabzadeh, N. Mitra, B. and Bagheri, E. In 30th ACM International Conference on Information and Knowledge Management.
- SIGIR 2021 [On the Orthogonality of Bias and Effectiveness in Ad hoc Retrieval](#). Bigdeli, A. Arabzadeh, N. Seyedsalehi, S. Zihayat, M. and Bagheri, E. In 44th International ACM SIGIR Conference on Research and Development in Information Retrieval.
- TREC 2021 [WaterlooClarke at the TREC 2021 Conversational Assistant Track](#). Yan, X. Clarke, C. and Arabzadeh, N. In 30th Text Retrieval Conference.
- ECIR 2022 [A Light-weight Strategy for Restraining Gender Biases in Neural Rankers](#). Seyedsalehi, S. Bigdeli, A. Arabzadeh, N. Zihayat, M. and Bagheri, E. In 44rd European Conference on Information Retrieval.
- ECIR 2021 [Query Performance Prediction through Retrieval Coherency](#). Arabzadeh, N. Bigdeli, A. Zihayat, M. and Bagheri, E. In 43rd European Conference on Information Retrieval.
- ECIR 2021 [Exploring Gender Biases in Information Retrieval Relevance Judgement Datasets](#). Bigdeli, A. Arabzadeh, N. Zihayat, M. and Bagheri, E. In 43rd European Conference on Information Retrieval.
- TREC 2020 [WaterlooClarke at the Trec 2020 Conversational Assistant Track](#). Arabzadeh, N. Clarke, C. In 29th Text Retrieval Conference.
- SIGIR 2020 [Vis-Trec: A System for the In-depth Analysis of trec_eval Results](#). Tamannaee, M. Arabzadeh, N. and Bagheri, E. In 43rd International ACM SIGIR Conference on Research and Development in Information Retrieval.
- IP&M 2020 [Neural Embedding-based Specificity Metrics for Pre-Retrieval Query Performance Prediction](#). Arabzadeh, N. Zarrinkalam, F. Jovanovic, J. Al-Obeidat, F. and Bagheri, E. In Information Processing and Management Journal.
- ECIR 2020 [Neural Embedding-based Metrics for Pre-Retrieval Query Performance Prediction](#). Arabzadeh, N. Zarrinkalam, F. Jovanovic, J. and Bagheri, E. In 42nd European Conference on Information Retrieval.
- CIKM 2019 [Geometric Estimation of Specificity within Embedding Spaces](#). Arabzadeh, N. Zarrinkalam, F. Jovanovic, J. and Bagheri, E. In Proceedings of the 28th ACM International Conference on Information and Knowledge Management.
- CIKM 2018 [Causal Dependencies for Future Interest Prediction on Twitter](#). Arabzadeh, N. Fani, H. Zarrinkalam, F. Navivala, A. and Bagheri, E. In Proceedings of the 27th ACM International Conference on Information and Knowledge Management.

INVITED TALKS

Evaluation of Information Access Systems in the Generative Era

Spring 2024 | keynote at 1st international Workshop on Open Web Search at ECIR 2024

Gender Fairness in Information Retrieval systems

Winter 2024 | Invited talk at Web Intelligence group at UCL

Summer 2023 | Invited Talk at IEEE Women in Engineering Seminar Series

Fall 2023 | Invited Talk at University of Glasgow Information Retrieval Group

Fall 2022 | Invited Talk at DEFirst reading group @ MILA x Vector Institute

Winter 2022 | Invited Talk at Spotify SPECS conference

A Close look at MS MARCO Hard Queries and Sparse labels

Fall 2021 | Invited Talk at Microsoft Bing Research Group

WORK EXPERIENCE

Winter 2021	Research Associate - University of Waterloo
Summer 2020	Conducting research on neural indexing, dense passage retrieval and conversational search
SPRING 2022	Consultant - GetWare
SUMMER 2021	Consulting with question answering and semantic search engine
Summer 2020	Research Associate - Toronto Metropolitan University
FALL 2019	Conducting research in information retrieval
WINTER 2019	Data scientist - Boss Insight Start-up company Design a model to predict start-up companies failure or success using machine learning techniques
SPRING 2017	Software developer in a web and application development company "Jahanjoy"
SUMMER 2016	Developing an advertisement website crawler, developed by C# , using MongoDB
SUMMER 2015	Robotic supervisor at National Organization for Development of Exceptional Talents
SUMMER 2012	Mentoring and teaching programming and electronic to high school students for robotic competitions.

ACADEMIC SERVICES

Program Committee	The Web Conf 2024 ECIR 2022, 2023, 2024 CIKM 2021, 2022, 2023 SIGIR 2023 ICTIR 2023 QPP++ 2023
Peer Review	Acl Rolling Review 2022, 2023 RecSys 2023 TOIS 2023 IP&M 2021, 2023 SIGIR 2022 ICWSM 2021 CanadianAI 2020 ASONAM 2018, 2020 CASCON 2018, 2019 SMSociety 2018

MENTORSHIP

2022- Now	Sara Salamat - Master's Thesis: Neural Disentanglement of Query Difficulty and Semantics
2022- 2023	Siqing Huo - Master's Thesis: Retrieving Supporting Evidence for LLM Generated Answers
2021- 2022	Mahsa Seifikar- Master's Thesis: A Preference Judgment Tool for Authoritative Assessment
2021- 2022	Dahlia Shehata - Master's thesis: Early Stage Sparse Retrieval with Entity Linking
2019- 2021	Amin Bigdeli - Master's Thesis: Gender bias in Information Retrieval systems

TEACHING ASSISTANT

2022-2023	Introduction to Computer Science 2 (CS116), University of Waterloo
2021-2023	Elementary Algorithm Design and Data Abstraction (CS136), University of Waterloo
2019-2020	Intelligent Systems (EE8219/ELE888), Toronto Metropolitan University
2018-2019	Bus Intelligence and Analytics (ITM618), Toronto Metropolitan University
2018	Data Structure and algorithm (COE428), Toronto Metropolitan University
2017-2021	Microprocessors (COE538), Toronto Metropolitan University
2017	Industrial Automation, AmirKabir University of technology