

Sajad Ebrahimi

[✉](mailto:sadjadeb@gmail.com) [🌐](https://sadjadeb.github.io) [👤](https://sadjadeb.com) [LinkedIn](#) [Google Scholar](#) [🏡](#) Toronto, ON

Summary

- Graduate researcher in **NLP and Information Retrieval** with 6+ peer-reviewed publications (TIST, SIGIR, ECIR, CIKM); focus on Generative approaches for ranking, Learning to Rank, Diffusion Models, and Automated Scholarly Peer Review. For the latest list of my publications, please refer to [my Google Scholar](#).
- Over 5 years of hands-on coding experience, spanning roles as a Data Scientist and a Software Engineer, specializing in designing, building, and deploying production-scale software and machine learning systems. Advanced proficiency in PyTorch, Django, Accelerate, Transformers, and related tools, with extensive experience delivering production-grade machine learning solutions.

Education

M.A.Sc. in Computer Engineering, University of Guelph Guelph, Canada | 2023 - 2025
Supervisors: Dr. Fattane Zarrinkalam and Dr. Ebrahim Bagheri
Affiliated with [Vector Institute for Artificial Intelligence](#) as Faculty Affiliate Researcher

- **GPA:** 89/100
- **Thesis:** DiffusionRank: A Denoising Diffusion Framework for Learning to Rank

B.Sc. in Computer Engineering, Ferdowsi University of Mashhad Mashhad, Iran | 2018 - 2023

Research Experience

Research Intern, Toronto Metropolitan University Fall 2022 - Summer 2023
Supervisor: Ebrahim Bagheri

- Proposed a novel Query Performance Prediction (QPP) framework using Nearest Neighbor Queries, achieving up to 4% improvement in Kendall's τ on benchmark datasets.
- Worked on improving the retrievers by utilizing Entity Linking; Used TagMe to extract the entities.

Research Assistant, Ferdowsi University of Mashhad Summer 2021 - Summer 2022
Supervisor: Behshid Behkamal

- Created a structured dataset by designing a data format with 19 key course features and developing a scraper to collect course information from top-ranked universities' catalogs.

Work Experience

Data Scientist, [Reviewerly](#) Toronto, Canada | Nov 2023 -

- Built and now maintain a Milvus-backed index of 260M+ papers and 96M+ authors, delivering sub-second similarity search that powers Reviewerly's matching engine, adopted by two peer-review venues and one grant agency in its first release cycle.
- Parallelized a keyphrase extraction model across 6 GPUs to process 200M records, accelerating the extraction process by 10x.

Data Analyst, Kava Investment Analysis Tehran, Iran | Sept 2021 - Aug 2022

- Built a scalable web scraper that collected data from 4+ sources across the Tehran Stock Exchange, reducing manual data collection time by 70%.
- Designed and implemented a PostgreSQL data warehouse: defined tables, indexes, and ETL pipelines for equities, bonds, and derivatives, which reduced query latency by 80%.

- Acquired essential knowledge in backend development, REST API implementation, and database design by contributing to 3 internal tools and APIs used by a team of 10+ developers.
- Learned the fundamentals of web development and built 2 internal-facing pages using HTML, CSS, and JavaScript.

Publications

TIST 2025	Bigdeli A, Ebrahimi S , Arabzadeh N, Salamat S, SeyedSalehi S, Khodabakhsh M, Zarrinkalam F, Bagheri E. Query Performance Prediction Using Neural Query Space Proximity . ACM Transactions on Intelligent Systems and Technology.
CIKM 2025	Ebrahimi S , Sadeghian S, Ghorbanpour A, Arabzadeh N, Salamat S, Li M, Le HS, Bashari M, Bagheri E. RottenReviews: Benchmarking Review Quality with Human and LLM-Based Judgments . In Proceedings of the 34th ACM International Conference on Information and Knowledge Management 2025 Nov 10 (pp. 5642-5649).
CIKM 2025	Arabzadeh N, Ebrahimi S, Ghorbanpour A, Sadeghian S, Salamat S, Li M, Son Le H, Bashari M, Bagheri E. Building Trustworthy Peer Review Quality Assessment Systems . In Proceedings of the 34th ACM International Conference on Information and Knowledge Management 2025 Nov 10 (pp. 6863-6864).
SIGIR 2025	Soleimany S, Ebrahimi S , SeyedSalehi S, Zarrinkalam F, Bagheri E. Reinforcement Learning for Effective Few-Shot Ranking . In Proceedings of the 48th International ACM SIGIR Conference on Research and Development in Information Retrieval 2025 Jul 13 (pp. 2956-2961).
ECIR 2025	Ebrahimi S , Salamat S, Arabzadeh N, Bashari M, Bagheri E. exHarmony: Authorship and Citations for Benchmarking the Reviewer Assignment Problem . In European Conference on Information Retrieval 2025.
MLJ 2024	SeyedSalehi S, Salamat S, Arabzadeh N, Ebrahimi S , Zihayat M, Bagheri E. Gender disentangled representation learning in neural rankers . Machine Learning. 2025 May;114(5):1-33.
CIKM 2024	Arabzadeh N, Ebrahimi S , Salamat S, Bashari M, Bagheri E. Reviewerly: modeling the reviewer assignment task as an information retrieval problem . In Proceedings of the 33rd ACM International Conference on Information and Knowledge Management 2024 Oct 21 (pp. 5554-5555).
ECIR 2024	Ebrahimi S , Khodabakhsh M, Arabzadeh N, Bagheri E. Estimating query performance through rich contextualized query representations . In European Conference on Information Retrieval 2024 (pp. 49-58).

Presentations and Talks

• RottenReviews: Benchmarking Review Quality with Human and LLM-Based Judgments, <i>CIKM 2025</i>	Nov 2025
• Estimating Query Performance Through Rich Contextualized Query Representations, <i>QPP++ 2025</i>	Apr 2025
• It Takes a Team to Triumph: Collaborative Expert Finding in Community QA Networks, <i>SIGIR-AP 2024</i>	Dec 2024
• Reviewerly: A High Quality Peer Reviewer Suggestion Application, <i>OpenAlex Virtual User Conference</i>	May 2024
• Intro to Neural Information Retrieval, <i>Special Topics in Information Retrieval, University of Guelph</i>	Nov 2023

Skills

Languages: Python, C, C++

Databases: PostgreSQL, MongoDB, SQLite, MySQL, Milvus

Misc: Git, Docker, Elasticsearch, Nginx, GraphQL, HTML/CSS, L^AT_EX, Unix-based OS

Selected Projects

QR Code Ticket System

2022

An app that generates a QR code for users and provides a QR reader for the receptionist to verify each ticket. This project is open source and has received 34 stars on GitHub.

Awards and Honors

- Braithwaite Travel Grant to attend ECIR 2025 Conference (3,500 CAD) 2025
- ECIR Student Support Grant to attend ECIR 2025 Conference (330 EUR) 2025
- Braithwaite Travel Grant to attend ACML 2024 Conference (2,600 CAD) 2024
- Braithwaite Travel Grant to attend ECIR 2024 Conference (2,800 CAD) 2024
- College of Engineering Deans Graduate Entrance Scholarship, UoGuelph (5,000 CAD) 2023
- Entrance Award in Recognition of Student Excellence in the College of Engineering, UoGuelph (12,000 CAD) 2023

Academic Services

- **Co-organizer:** CIKM Workshop on Proactive Conversational Information Seeking with Large Language Models ([ProActLLM](#)), 2025
- **Program Committee:** WSDM 2026, WWW 2026, ECIR 2026, TOIS 2025, SIGIR 2025, ICTIR 2025, LLMReasoning@ICLR 2025, COLING 2025

Teaching Experience

Teacher Assistant, Ferdowsi University of Mashhad

Iran | 2019 - 2023

- Information Retrieval, Fall 2022 - Winter 2023
- Data Mining, Winter 2022
- Database, Fall 2021 - Winter 2022
- Computer Architecture, Fall 2020 - Winter 2021

- Discrete Mathematics, Winter 2020
- Object Oriented Programming, Winter 2020
- Fundamentals of Computer Programming, Fall 2019

Middle School Instructor, Andishe Iranian School

Iran | 2020 - 2021

- Taught Python programming fundamentals to students in grades 7 through 10, covering basic concepts such as variables, loops, conditionals, and functions, and fostering problem-solving and logical thinking skills.

References

References will be available upon request.