Sajad Ebrahimi

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RESEARCH INTERESTS

- Natural Language Processing
- Information Retrieval
- Deep Learning

EDUCATION

M.A.Sc. in Computer Engineering | University of Guelph   Canada | Fall 2023 -
- **CGPA**: 90/100
- **Thesis**: Generative Learning-to-Rank based on Denoising approach

B.Sc. in Computer Engineering | Ferdowsi University of Mashhad   Iran | Fall 2018 - Winter 2023
- **CGPA**: 81/100
- **Selected courses**: Fundamentals of Information Retrieval(A+), Data Mining(A+), Database(A+)

RESEARCH EXPERIENCE

Graduate Research Assistant | University of Guelph   Fall 2023 -
Supervisors: Dr. Ebrahim Bagheri and Dr. Fattane Zarrinkalam
- Developing low-resource ranker based on Reinforcement Learning algorithms - Working on Generative Learning-to-Rank model

Research Intern | Toronto Metropolitan University   Fall 2022 - Summer 2023
Supervisor: Dr. Ebrahim Bagheri
- Improving dense retriever utilizing Entity Linking - Enhancing the performance of QPP models by enriching the representation of queries

Research Assistant | Ferdowsi University of Mashhad   Summer 2021 - Summer 2022
Supervisor: Dr. Behshid Behkamal
- Designing an effective data structure - Developing scrapers to find universities' course catalogs data - Text summarizing and Keyword extracting by state-of-the-art models

SKILLS

Languages: Python, C, C++, Java

Python Frameworks and Packages:
- PyTorch, TensorFlow, Transformers, Pandas, NumPy, Matplotlib, SKlearn, NLTK, spaCy
- Django, Django Rest Framework, Flask, Fastapi
- Selenium, Pytest, Doctest, BeatifulSoup4
- python-telegram-bot, Tweepy

Databases: PostgreSQL, MongoDB, SQLite, MySQL

Misc: Git, Docker, Elasticsearch, Nginx, GraphQL, HTML/CSS, LaTeX, Unix-based OS

PUBLICATIONS

Gender Disentangled Representation Learning in Neural Rankers   MLJ'24
Sh.SeyedSalehi, S.Salamat, N.Arabzadeh, **S.Ebrahimi**, M.Zihayat, E.Bagheri

Estimating Query Performance Through Rich Contextualized Query Representations   ECIR'24
S.Ebrahimi, M.Khodabakhsh, N.Arabzadeh, E.Bagheri

Reviewerly: Modeling the Reviewer Assignment Task as an Information Retrieval Problem   Industry Day@CIKM'24
N.Arabzadeh, **S.Ebrahimi**, S.Salamat, M.Bashari, E.Bagheri

Authors Know the Best: Leveraging Authorship for Benchmarking the Reviewer Assignment Problem   *ECIR'25
S.Ebrahimi, S.Salamat, N.Arabzadeh, M.Bashari, E.Bagheri

Reinforcement Learning for Effective low-resource Ranking   *ECIR'25
Sh.Soleimany, **S.Ebrahimi**, Sh.SeyedSalehi, F.Zarrinkalam, E.Bagheri

Nearest Neighbor QPP: A Dual-Stage Approach to Enhancing QPP Models   *IP&M
S.Ebrahimi, A.Bigdeli, N.Arabzadeh, F.Zarrinkalam, E.Bagheri

From Noise to Order: Diffusion-Powered Learning-to-Rank   In prepration
S.Ebrahimi, H.Wu, Y.Yuan, N.Arabzadeh, B.Mitra, F.Zarrinkalam, E.Bagheri

* These works have been submitted and are under review.

WORK EXPERIENCE

Data Scientist | Reviewerly   Toronto, Canada | Nov 2023 -
- Trained a peer reviewer assignment model inspired by the Dense Retriever's concept for academic papers.
- Formulated a pipeline for clustering proposals and selecting an expert from the relevant pool for each cluster.

Data Analyst | Kava Tahlil   Tehran, Iran | Sept 2021 - Aug 2022
- Developed a scraper to gather data from various sources of the Tehran Stock Exchange and store it in MongoDB.
- Designed data models for different types of stocks and organized data.
- Recognized, analyzed, and interpreted trends and patterns in complex financial data.

Software Engineer Intern | Zima   Iran | Sept 2020 - Feb 2021
- Acquired essential knowledge in backend development, REST API implementation, and database design.

Web Developer Intern | Iliasystem Co.   Iran | Aug 2019 - Feb 2020
- Learned the fundamentals of Web development, Got familiar with HTML / CSS / JS.

TALKS

- Reviewerly: A High Quality Peer Reviewer Suggestion Application, *OpenAlex Virtual User Conference*   May 2024
- Intro to Neural Information Retrieval, *Special Topics in Information Retrieval, University of Guelph*   Nov 2023

AWARDS AND ACKNOWLEDGEMENTS

- University of Guelph College of Engineering Dean's Graduate Entrance Scholarship, University of Guelph   2023
- Entrance Award in Recognition of Student Excellence in the College of Engineering   2023
- Ranked 10 among over 80 teams in the 6th AmirKabir university programming league   2019
- Ranked amongst the top 1% of 144k participants in the Nationwide Entrance exam of Iranian universities   2018

SELECTED PROJECTS

Neural Retriever utilizing Entities   2023
A retrieval model that enriches the representation of the queries and passages by the representation of their entities.

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.

Wordle Vaajoor helper   2022
his script helps you to solve Wordle and Vaajoor games. Accessible via command line or API or telegram bot.

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 fundamentals of computer programming to students aged 13 to 16.

VOLUNTEER EXPERIENCE

Senior Member | Scientific Society of Computer Engineering Students-Ferdowsi University of Mashhad   2019 - 2022

Senior Member | Linux Users' Group of Ferdowsi University of Mashhad   2022

Reviewer and Executive chair | 3-Minutes Presentation Competition of Ferdowsi University of Mashhad   2021

Senior Executive Committee Member | International Conference on Computer and Knowledge Engineering 2021

Executive Committee Member | National Conference on Advances in Enterprise Architecture   2021

Senior Executive Member | FUM Collegiate Programming Contest (FCPC)   2019

REFERENCES

References will be available upon request.