SAJAD EBRAHIMI

Email | LinkedIn | Github | Website | Toronto, Canada

RESEARCH INTERESTS

- Natural Language Processing
- Information Retrieval
- Deep Learning

EDUCATION

M.A.Sc. in Computer Engineering | UNIVERSITY OF GUELPH   Canada | Fall 2023 - Present
- **CGPA**: 89/100
- **Selected courses**: Information Retrieval(A+)

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 | TORONTO METROPOLITAN UNIVERSITY   Fall 2023 - Present
Supervisors: Dr. Ebrahim Bagheri and Dr. Fattane Zarrinkalam
- Developing low-resource ranker based on Reinforcement Learning - Mitigating Gender bias of rankers

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

Estimating Query Performance Through Rich Contextualized Query Representations   ECIR 2024
S.Ebrahimi, M.Khodabakhsh, N.Arabzadeh, E.Bagheri

Fair Reinforcement Learning-Based Ranking: Mitigating Gender Bias in Document Retrieval   In-Preparation
Sh.Soleimany, **S.Ebrahimi**, Sh.SeyedSalehi, E.Bagheri

WORK EXPERIENCE

Data Scientist | Reviewerly   Toronto, Canada | Nov 2023 - Present
- 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   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 | Freelance   Iran | March 2021 - April 2022
- Created the backend for the Bahar Charity website using Django Rest Framework. Users are enabled to settle appointment bills, while administrators can access diverse reports concerning invoices and appointments.
- Engineered the Somchin mobile app employing Django Rest Framework. It facilitates the logging of cattle injuries and generates comprehensive reports throughout each treatment phase.
- Devised a script for synchronizing databases across various grocery stores to streamline inventory tracking on an integrated platform.

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.

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 2% 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.

Dataset preprocessing, Frequent pattern discovery and Clustering on Digikala dataset   2021
My project for the Data Mining course at Ferdowsi University of Mashhad.

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
- 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

LANGUAGES

- **English**: Fluent
- **Persian**: Native

REFERENCES

References will be available upon request.