

# SAJAD EBRAHIMI

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## RESEARCH INTERESTS

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- Natural Language Processing
- Information Retrieval
- Deep Learning

## EDUCATION

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**M.A.Sc. in Computer Engineering** | [UNIVERSITY OF GUELPH](#) Guelph, Canada | 2023 - Present

- **Overall GPA:** 89/100
- **Selected courses:** Information Retrieval(A+)

**B.Sc. in Computer Engineering** | [FERDOWSI UNIVERSITY OF MASHHAD](#) Mashhad, Iran | 2018 - 2023

- **Overall GPA:** 81/100 (16.18/20)

## RESEARCH EXPERIENCE

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**Graduate Research Assistant** | TORONTO METROPOLITAN UNIVERSITY Toronto, CA | Sept 2023 - Present  
Under the supervision of [Dr. Ebrahim Bagheri](#) and [Dr. Fattane Zarrinkalam](#)

**Research Intern** | TORONTO METROPOLITAN UNIVERSITY Toronto, Canada - Remote | Sept 2022 - Sept 2023  
Under the supervision of Dr. Ebrahim Bagheri @ [LS3](#)

- Worked on improving the result of dense retriever for obstinate queries of the MS-MARCO dataset utilizing Entity Linking.
- Worked on enhancing the performance of query performance predictor by reaching the representation of queries

**Research Assistant** | FERDOWSI UNIVERSITY OF MASHHAD Mashhad, Iran | July 2021 - Sept 2022  
Under the supervision of Dr. Behshid Behkamal

- Designed an effective data model that contains 19 essential features of each course; Developed a scraper that stores course data from universities' course catalogs.
- Utilized state-of-the-art models to summarize and extract keywords of each course description

## SKILLS

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**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, BeautifulSoup4
- python-telegram-bot, Tweepy

**Databases:** PostgreSQL, MongoDB, SQLite, MySQL

**Misc:** Git, Docker, Elasticsearch, Nginx, GraphQL, HTML/CSS,  $\text{\LaTeX}$ , Unix-based OS

## PUBLICATIONS

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Fair Reinforcement Learning-Based Ranking: Mitigating Gender Bias in Document Retrieval In-Preparation  
SH.SOLEIMANY, **S.Ebrahimi**, SH.SEYEDSALEHI, E.BAGHERI

Estimating Query Performance Through Rich Contextualized Query Representations ECIR 2024  
**S.Ebrahimi**, M.KHODABAKHSH, N.ARABZADEH, E.BAGHERI

## WORK EXPERIENCE

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### **Data Analyst** | KAVA TAHLIL

Tehran, Iran - Part-Time - Remote | Sept 2021 - Aug 2022

- Developed a scraper to gather data from various sources of the Tehran Stock Exchange and store it in MongoDB.
- Design data models for different types of stocks and organize data into usable formats.
- Identify, analyze, and interpret trends and patterns in complex data sources.

### **Software Engineer** | FREELANCE

Mashhad, Iran | March 2021 - April 2022

- Developed *Bahar Charity* website back-end utilized Django Rest Framework. Beneficiaries can pay appointments bill and administrators can get various reports on invoices and appointments.
- Developed *Somchin* mobile app utilized Django Rest Framework. Injuries to cattle can be logged and a report can be generated during each treatment step. The admin panel provides access to all reports and users' activity.
- Developed a script to synchronize the databases of different hypermarkets to track the inventory of each good in an integrated platform.

### **Software Engineer Intern** | ZIMA

Mashhad, Iran | Sept 2020 - Feb 2021

### **Web Developer Intern** | ILIASYSTEM CO.

Mashhad, Iran | Aug 2019 - Feb 2020

## AWARDS AND ACKNOWLEDGEMENTS

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- College of Engineering Dean's Graduate Entrance Scholarships, University of Guelph 2023
- Entrance Award in Recognition of Student Excellence in the College of Engineering, University of Guelph 2023
- Ranked amongst the top 2% of 144k participants in the Nationwide Entrance exam of Iranian universities 2018

## PROJECTS

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### **Neural Retriever utilized Entities**

PYTORCH, SENTENCE-TRANSFORMERS | 2023

A retrieval model that enriches the representation of the queries and passages by the representation of their entities.

### **QR code ticket system**

FASTAPI | 2022

This service generates a unique QR code for each registered user and provides a QR reader for the receptionist to verify each ticket powered by Fastapi.

## VOLUNTEER EXPERIENCE

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**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

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

## REFERENCES

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References will be available upon request.