

Mohammad AzariJafari

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May 8, 1992
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Education

- **M.Sc.**, Information Technology Engineering University of Qom, Iran
Thesis: Use of Transfer Learning for Inference in Persian Language using English Language Data 2017 - 2020
Supervisor: Dr. Hossein Amirkhani
GPA: 19.18 / 20.00
- **B.Sc.**, Information Technology Engineering Shahrood University of Technology, Iran
Project: Designing and Developing an Online Examination Website to Evaluate Students 2011 - 2016
Supervisor: Dr. Ali Bazghandi

Teaching Experiences

- **Lecturer** University of Qom, Iran
Teaching MATLAB programming basics course in Department of Engineering. 2021 - 2022
- **Course Instructor** FaraDars Online Education Platform
Teaching web crawler design course with Python programming language. 2019 - present
- **Teaching Assistant** University of Qom, Iran
Teaching and supervising projects in Data Mining and Information Retrieval courses for multiple semesters in the Department of Computer Engineering. 2019 - 2021
- **Teaching Assistant** Shahrood University of Technology, Iran
Teaching and supervising projects in 12 programming courses in the faculties of computer engineering, mechanical engineering, mathematics, and physics. 2012 - 2016
- **Teacher** Dr. Hesabi Institute, Iran
Teaching ICDL to high school students. 2010

Honors & Awards

- Ranked 1, among master students of IT Engineering at University of Qom. 2017 - 2020
- Ranked among top 2% in national university entrance exam in M.Sc. IT engineering. 2017
- Accepted in national entrance exams of magnet schools at middle and high school. 2003 & 2006
- Ranked 1, in the Student Mathematical Olympiad in Tehran province, Iran. 2005

Research Interests

- Machine Learning • Deep Learning • Natural Language Processing • Information Retrieval

Skills

- **Programming/Scripting**
Python, Matlab, C/C++, Fortran, SQL, HTML, CSS
- **Libraries/Frameworks**
Tensorflow, Keras, Sklearn, NLTK, BeautifulSoup, Selenium, NumPy, Pandas
- **Tools/Platforms**
Google Colab, Jupyter Notebook, Visual Studio, SPSS, Power BI, WordPress, LaTeX, ICDL, Git
- **Languages**
Persian, English

Publications

Journal papers

- **AzariJafari, M.**, Amirkhani, H. (2023).
A Combined Approach of Ensemble Learning and Transfer Learning for Low-Resource Natural Language Inference.
Expert Systems With Applications. (Under Review)
- Amirkhani, H., **AzariJafari, M.**, Faridan-Jahromi, S., Kouhkan, Z., Pourjafari, Z., & Amirak, A. (2023).
FarsTail: a Persian natural language inference dataset.
Soft Computing. [↗](#)

Conference papers

- **AzariJafari, M.** (2021).
A Survey on Word Embedding Techniques in Text Processing.
8th International Conference on Innovative Technologies in Science, Engineering and Technology.
Athens, Greece.
- **AzariJafari, M.,** Sadeghi, F., & Iranpour Mobarakeh, M. (2021).
An Overview of Natural Language Inference Datasets in English Language.
Fourth International Conference on Information Technology, Computer and Telecommunication Engineering.
Tehran, Iran.
- **AzariJafari, M.** (2021).
An Overview of Natural Language Inference Datasets in Low-Resource non-English languages.
7th International Conference on Advance Research in Science Engineering & Technology.
Dubai, United Arab Emirates.
- **AzariJafari, M.,** Sadeghi, F. (2021).
Data Mining Applications in Intelligent Public Urban Transportation Systems: A Review and Proposed Solutions.
Eleventh National Conference on Electrical, Computer and Mechanical Engineering.
Shirvan, North Khorasan, Iran.

Highlighted Projects

- **Cross-Lingual Knowledge Transfer** 2020 - present
 - Use of **Transfer Learning** techniques to overcoming training data scarcity in NLP tasks.
 - knowledge transfer from a **data-rich** source language to a **data-poor** target language.
 - Enhancing NLP in low-resource languages through **cross-lingual** knowledge transfer.
- **Occupational Medical Data Analysis** 2021 - 2022
 - **Pattern recognition** in workers' medical data in an automobile manufacturing company.
 - Predicting workers' traumas through mining **frequent patterns** and **association rules**.
 - Guiding physicians in accurate **prevention, diagnosis, and treatment** of traumas.
 - Assisting managers in allocating safer workspaces to effectively prevent harm to workers.
- **ML-based Prediction of ICU Stay Length** 2020 - 2021
 - Employing **Machine learning** to predict ICU stay length and optimize hospital bed usage.
 - Enhancing Prediction accuracy using **Classification** and **Linear Regression** algorithms.
- **Data Analysis using SPSS** 2020
 - Utilizing **SPSS** for the analysis of experimental hospital data in a **teamwork study**.
 - Collaboration with gynecologists for the **statistical examination** of twin pregnancies.
- **Data Collection for Persian NLI Task** 2018 - 2020
 - Collecting the **First** Persian dataset for **Natural Language Inference (NLI)** task. [↗](#)
 - Developing an advanced method to generate 10,000+ high-quality real-world samples.
 - Publishing experimental results of prominent NLI models on FarsTail dataset in a **paper**. [↗](#)
 - The result of **teamwork** at University of Qom **Data Mining and Machine Learning Lab**.
- **Sentiment Analysis of Customer Reviews** 2019
 - Designing a **web scraper** to extract all customer reviews from an online store (DigiKala).
 - **Sentiment analysis** by classifying reviews into sentiment classes using pretrained models.
 - Utilizing **classification** and **regression** methods to predict customers' satisfaction rates.
- **Wikipedia Languages Dependency Analysis** 2017 - 2018
 - Developing a Wikipedia web crawler to create a structured dataset of articles' languages.
 - Identifying language dependencies by classifying articles into specific target languages.
 - Creating a recommender system to aid the website contributors in translating vital articles.

Work Experiences

- **Python Developer** 2019 - present
 - Contributing in numerous freelance projects specifically in the fields of Data Science.
(Machine Learning, Deep Learning, Pattern Recognition, Text Mining, etc.)
- **IT Specialist** 2017
 - Inputting information into the system of General Department of Grain and Commercial Services.
- **Senior Programmer** 2013 - 2017
 - Developing freelance projects C, C ++, MATLAB, Fortran, and Python programming languages.

Scientific Memberships

- **Data Science Researcher** 2018 - present
University of Qom Data Mining and Machine Learning Lab.
- **Continuous Member** 2021 - 2022
Iranian E-Commerce Scientific Association.
- **Continuous Member** 2021 - 2022
Iranian Society of Engineering Education (ISEE).
- **Coordination Committee Member** 2018
International Conference on Distributed Computing and High Performance Computing (DCHPC).

Referees

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|---|---|--|
| • Dr. Hossein Amirkhani
Assistant Professor
Department of Computer
Engineering & IT
University of Qom, Iran
amirkhani@qom.ac.ir | • Dr. Yaghoub Farjami
Associate Professor
Department of Computer
Engineering & IT
University of Qom, Iran
farjami@qom.ac.ir | • Dr. Amir Jalaly Bidgoly
Assistant Professor
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