Sina Bagheri Nezhad

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Education

PhD in Computer Science (in progress)	Sep 2022 – Dec 2025 (anticipated)
Portland State University	

Masters in Computer Engineering - Artificial Intelligence	Sep 2019 – Dec 2021
Iran University of Science and Technology	

Masters in Technology Management	Feb 2014 – Feb 2017
University of Tehran	

Bachelor in Industrial Engineering	Sep 2007 – Jul 2012
Karaj Azad University	

Professional Experience

Graduate Research Assistant — Aug 2023 - Now
Portland State University
- Investigate multilingual model scaling impacts on both seen and unseen languages.
- Research fairness in multilingual QA and summarization, ensuring equitable model performance.
- Develop fair clustering algorithms, contributing to novel approximation solutions.

Graduate Teaching Assistant — Sep 2022 - Now
Portland State University
- TA for Ethics in AI and Discrete Structures, supporting course delivery and student learning.

Head of Software Development — Sep 2021 - Aug 2022
Basir Andishan Bina Tadbir
- Introduced agile workflows and code review processes, improving efficiency and code quality.
- Configured and optimized Jira, Bitbucket, and Confluence for streamlined project management.
- Mentored team members on best practices, increasing overall productivity and collaboration.

Manager and Founder — Apr 2012 - Mar 2022
ElectroSadaf
- Expanded market share by targeting underserved demographics, driving sustained revenue growth.
- Implemented cost management and differentiation strategies, discovering "blue ocean" opportunities.
- Built strong customer relationships, enhancing long-term client retention.

Researcher — Sep 2020 - Apr 2021
Data mining lab @ Iran University of Science and Technology
- Developed multilingual retrieval methods for Arabic-Persian corpora using Elasticsearch.
- Implemented search suggestion techniques leveraging user behavior patterns.

Graduate Teaching Assistant — Sep 2020 - Fab 2021
Iran Univeristy of Science and Technology
- TA in Neural Networks, assisting with lab sessions and student evaluations.

Earlier Teaching Roles — 2010 - 2017
Various Institutions
- Supported courses in Non-parametric Statistics, Operations Research, and Engineering Statistics.

Planning and Project Control Expert — Apr 2016 - Jul 2016
GS1 Iran
- Analyzed and controlled development of solutions following international GS1 standards.

Publications

Scaling Cross-Lingual Retrieval to 512K Tokens with Efficient Multilingual Embeddings — Under-review
Sina Bagheri Nezhad and Ameeta Agrawal

Constant-Approximation Algorithms for Fair Sum-of-Radii Clustering — Under-review
Sina Bagheri Nezhad, Sayan Bandyapadhyay and Tianzhi Chen

Fair Summarization: Bridging Quality and Diversity in Extractive Summaries — 2025
Sina Bagheri Nezhad, Sayan Bandyapadhyay and Ameeta Agrawal
Presented at Algorithmic Fairness through the Lens of Metrics and Evaluation @ NeurIPS 2024
Accepted for publication at The 3rd Workshop on Cross-Cultural Considerations in NLP (C3NLP) @ NAACL 2025

The Impact of Model Scaling on Seen and Unseen Language Performance — 2025
Rhitabrat Pokharel, Sina Bagheri Nezhad, Ameeta Agrawal and Suresh Singh

The First Workshop on Scalable and Efficient Artificial Intelligence Systems (SEAS) @ AAAI 2025

Beyond Data Quantity: Key Factors Driving Performance in Multilingual Language Models 2025
Sina Bagheri Nezhad, Ameeta Agrawal and Rhitabrat Pokharel
The First Workshop on Language Models for Low-Resource Languages @ COLING 2025

Evaluating Multilingual Long-Context Models for Retrieval and Reasoning 2024
Ameeta Agrawal, Andy Dang, Sina Bagheri Nezhad, Rhitabrat Pokharel and Russell Scheinberg
The 4th Multilingual Representation Learning (MRL) Workshop @ EMNLP 2024

What Drives Performance in Multilingual Language Models? 2024
Sina Bagheri Nezhad and Ameeta Agrawal
The Eleventh Workshop on NLP for Similar Languages, Varieties and Dialects (VarDial 2024) @ NAACL 2024

Exploring the Maze of Multilingual Modeling 2023
Sina Bagheri Nezhad and Ameeta Agrawal
arXiv preprint arXiv:2310.05404

Smoking prevalence in Covid-19 patients 2021
Sina Bagheri-Nezhad, Nasser Mozayani, Elham Abdi, Setareh Rostami
arXiv preprint arXiv:2107.13599

Investigation of the smoking prevalence among critically ill patients with COVID-19 2021
Sina Bagheri-Nezhad, Elham Abdi, Nasser Mozayani, Marzieh Mehrafza
Journal of Control 14 (5), 33-37

PROFESSIONAL INVOLVEMENT

- Reviewer: Computational Intelligence, EMNLP 2023, COLING 2024, CALDAM 2024, and other conferences.
- PC Member: SustaiNLP @ ACL 2023

CERTIFICATES

- Deep Learning Specialization (deeplearning.ai)
- Reinforcement Learning Specialization (University of Alberta & amii)
- TensorFlow Developer Professional Certificate (deeplearning.ai)

TECHNICAL & COMMUNICATION SKILLS

- Programming: Python
- NLP & ML Libraries: PyTorch, TensorFlow, Hugging Face, Scikit-learn
- Data Analysis: Numpy, Pandas, SciPy, Matplotlib, Plotly
- Tools: Git, Jira, Bitbucket, Confluence
- Languages: English, Persian