

Elham Aghakhani

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📍 Philadelphia, PA

🌐 <http://elhamaghakhani.github.io>

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Education

PhD Drexel University, Information Science

Jan 2024 - Now

- **Coursework:** Foundations of Human-centered Computing, Qualitative Research Methods, Quantitative Research Methods, Foundations of Data Science

MS K.N Toosi University of Technology, Computer Science, AI

Oct 2020 - Sep 2023

- GPA: 4/4.0
- **Coursework:** Machine Learning, Pattern Recognition, Big Data Analysis, Reinforcement Learning
- **Thesis:** Automatic Persian Text Summarization using Pre-trained Language Models and Reinforcement Learning.

BS K. N. Toosi University of Technology, Computer Science

Sep 2015 - Sep 2019

- **Thesis:** Implementing an Automatic System to Collect News from News Agencies.

Research Interests

- Natural Language Processing
- Computational Social Science
- Machine Learning

Publications

- Bouzouba L, **Aghakhani E**, Rezapour R (2025). *Phenotypes of stigma expressed by people who use drugs on Reddit*. (Under review at Social Science and Medicine, Elsevier).

- Namvarpour M*, **Aghakhani E***, Ekstrand MD, Rezapour R, Razi A. (2025). *The Evolving Landscape of Youth Online Safety: Insights from News Media Analysis*. **WebSci'25**.

*Equal contribution.

- **Aghakhani E**, Wang L, Washington KT, Demiris G, Huh-Yoo J, Rezapour R. (2025). From Conversation to Automation: Leveraging LLMs for Problem-Solving Therapy Analysis. Findings of the Association for Computational Linguistics (**ACL**), Vienna, Austria, pp. 25189–25207.

- Bouzoubaa L, **Aghakhani E**, Rezapour R. (2024). Words Matter: Reducing Stigma in Online Conversations about Substance Use with Large Language Models. In Proceedings of the 2024 Conference on Empirical Methods in Natural Language Processing (**EMNLP**) Nov 2024.

- Bouzoubaa L, **Aghakhani E**, Song M, Trinh M, Rezapour R. (2024). Decoding the Narratives: Analyzing Personal Drug Experiences Shared on Reddit. The 62nd Annual Meeting of the Association for Computational Linguistics (**ACL**) Findings.

Experience

Drexel University, Instructor of Record

- Introduction to Data Science (INFO103-900)

PA, USA
June 2025 - Sep 2025

Drexel University, Teaching Assistant

- Social Collaborative and Computing (INFO616)

PA, USA
Jan 2025 - Mar 2025

Drexel University, Research Assistant

- Collaborated on multiple NLP and Computational Social Science projects focused on social media, therapy conversations, and news framing.
- Led efforts in data processing, model development, and experimental design using Large Language Models (LLMs).
- Coordinated with interdisciplinary teams on manuscript writing and result interpretation.
- Contributed to projects that led to publications in top NLP conferences (e.g., ACL, EMNLP) and journals.

PA, USA
Jan 2024 - Now

K. N. Toosi University, Teaching Assistant

- Probabilistic Graphical Models
- Machine Learning
- Statistical Pattern Recognition

Tehran, Iran
Nov 2021 - July 2022

ERON Company, Web Developer

- Designing and building databases, web applications, and webpages using backend technologies.

Tehran, Iran
Sep 2019 - Mar 2020

VADA House of Mobile, Web Developer

- Design and Implement Web Applications and APIs with PHP, Laravel

Tehran, Iran
Jan 2019 - Sep 2019

Projects

Persian Question-Answering with T5

- A Question Answering model for persian QA dataset. In this project, T5 model is fine-tuned for Question Answering task using HuggingFace Transformers, pytorch Lightning & Python.
- Repo: <https://github.com/elhamaghakhani/Persian-Question-Answering-with-T5>

Shereno: A Dataset of Persian Modernist Poetry

- Web scraped from shereno.com, a large corpus of Persian modernist poems. Along with each poem, its metadata have also been scraped such as poem name, poet name and its book name.
- Repo: <https://www.kaggle.com/datasets/elhamaghakhani/persian-poems>

Sentiment Analysis of Google Play Reviews by BERT

- In this project we BERT is fine-tuned for the task of sentiment analysis of Google Play reviews. the required text pre-processing (special tokens, padding, and attention masks) and building a Sentiment Classifier using the amazing Transformers library by HuggingFace is implemented.
- Repo: <https://github.com/elhamaghakhani/Review-Analysis-by-BERT>

Job Searching website

- A job searching and posting website, implemented with PHP programming language, laravel framework and front-end web development skills. In this website, users can register, login as well as post a job or search through posted jobs by filters.
- Github Repo: https://github.com/elhamaghakhani/job_search

Awards, Fellowships, and Highlights

Selected to attend the 8th Annual Summer Institute in Computational Social Science, University of Pennsylvania

Philadelphia, PA
July 2024

Certifications

Natural Language Processing, Coursera (Aug 2021):

- Credential ID: 5WUJGRXXP22V

Machine learning in python with scikit-learn, France Universite Numerique (Jul 2021):

- Credential ID: 4TD52DHM5TCD

Deep Learning workshop, IEEE Iran section (Mar 2021):

- Credential ID: 147474

Technologies

Languages: Python, Java, SQL

Libraries: Pytorch, Keras, Scikit-Learn, HuggingFace, Numpy, Pandas