

# Elham Aghakhani

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📍 Philadelphia, PA

🌐 <http://elhamaghakhani.github.io>

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## Education

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- PhD Drexel University**, Information Science Jan 2024 - Now
- MS K.N Toosi University of Technology**, Computer Science, AI Oct 2020 - Sep 2023
- GPA: 4/4.0
  - **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

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- Natural Language Processing
- Computational Social Science
- Machine Learning

## Publications

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### 2025

- 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.

### 2024

- 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.

## Peer Review Activities

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- Reviewer, *ICWSM 2025* (1 paper)
- Reviewer, *ACL 2025* (4 papers)
- Reviewer, *NAACL 2024* (2 papers)
- Reviewer, *EMNLP 2024* (2 papers)

## Experience

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### Instructor of Record

- **Drexel University:** Introduction to Data Science (INFO103-900) – Summer 2025

### Teaching Assistant

- **Drexel University:**
  - Web Systems and Services (INFO151) - Fall 2025
  - Social Collaborative and Computing (INFO616) – Winter 2025
- **K. N. Toosi University of Technology:**
  - Probabilistic Graphical Models – 2021–2022
  - Machine Learning – 2021–2022
  - Statistical Pattern Recognition – 2021–2022

### Research Assistant

- **Drexel University** (Jan 2024 – Present)
  - Worked on NLP and Computational Social Science projects involving social media, therapy conversations, and news framing.
  - Led data processing, model development, and experimental design using Large Language Models (LLMs).
  - Collaborated on manuscripts and contributed to publications in top NLP venues (ACL, EMNLP).

### Industry Experience

- **ERON Company**, Web Developer (Sep 2019 – Mar 2020)
  - Designed and built databases, web applications, and webpages using backend technologies.
- **VADA House of Mobile**, Web Developer (Jan 2019 – Sep 2019)
  - Designed and implemented web applications and APIs using PHP and Laravel.

## Projects

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### 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](https://github.com/elhamaghakhani/job_search)

## Awards, Fellowships, and Highlights

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

Philadelphia, PA  
July 2024

## Certifications

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**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

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**Languages:** Python, Java, SQL

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