Elham Aghakhani

✉ ea664@drexel.edu   📍 Philadelphia, PA   🔗 http://elhamaghakhani.github.io   in elham-aghakhani

○ elhamaghakhani

Education

PhD **Drexel University**, Information Science   Jan 2024 - Now
- **Coursework:** Foundations of Human-centered Computing, Qualitative Research Methods, Foundations of Data Science

MS **K.N Toosi University of Technology**, Computer Science   Oct 2020 - Sep 2023
- GPA: 4/4.0
- **Coursework:** Machine Learning, Pattern Recognition, Big Data Analysis, Reinforcement Learning
- **Thesis:** 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

Experience

Drexel University, Research Assistant   PA, USA
                                                                                    Jan 2024 - Now
- Contributed to a research initiative aimed at identifying and reducing stigmatizing language in social media posts about people who use drugs, utilizing Large Language Models (LLMs) to detect and modify such content (Published @ EMNLP Main)
- Contributed to a Substance Use Disorder (SUD) project by handling the methodological aspects, designing, and developing classification models to differentiate various narratives related to SUD on Reddit. (Published @ACL Findings)
- Engaged in a collaborative project focusing on analyzing conversation transcripts between the therapist and patient, employing various Large Language Models (LLMs) to explore their effectiveness in transcript annotation. (Under Review)
- Participated in a project aimed at extracting news from diverse agencies for frame analysis, specifically focusing on the portrayal of online child safety issues. (Under Review)

K. N. Toosi University, Teaching assistant   Tehran, Iran
                                                                                    Nov 2021 - July 2022
- Teaching assistant in 'Probabilistic Graphical Models' graduate course
- Teaching assistant in 'Machine Learning' graduate course
- Teaching assistant in 'Statistical Pattern Recognition' graduate course

ERON Company, Developer   Tehran, Iran
                                                                                    Sep 2019 - Mar 2020
- Designing and building databases, web applications, and webpages using backend technologies.

VADA House of Mobile, Developer   Tehran, Iran
  • Design and Implement Web Applications and APIs with PHP, Laravel   Jan 2019 – Sep 2019

Publications

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

- 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.

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

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