Hamidreza Saffari

Email | Homepage | Google Scholar | Linkedin | Github

Educaiton

Politecnico di Milano Milan, Italy
MSc in Computer Science and Engineering *Sep. 2023 - Sep. 2025*
- Artificial Intelligence track

Shahid Beheshti University Tehran, Iran
Bachelor of Computer Engineering *Sep. 2018 - Jan. 2023*
- **Bachelor Project Title:** Graph embedding learning for link prediction in dynamic graphs using Autoencoders.

Publications

[1] PSN: Persian Social Norms Dataset for Cross-Cultural AIs *Under Review*
–**H. Saffari**, M Shafiei, F Pierri *CIKM 2024*

[2] A type-2 neuro-fuzzy system with a novel learning method for Parkinson's disease diagnosis *Published*
–A. Salimi-Badr, M. Hashemi, **H. Saffari** *APIN 2023*

[3] PsychoBERT: Fine-tuning Transformer Models for Psychological Similarity in Text *Under Preparation*
–Researcher and Co-author *2024*

[4] Software defect prediction via software visualization *Submitted*
–Researcher and Co-author *Expert Syst. Appl.*

Research Experience

Detecting Cultural Biases in LLMs Mar. 2024 - Present
-Under the supervision of Dr. Francesco Pierri *Polimi, Milan*
- Working on detecting different biases in LLMs

NLP Applications in Psychology Sep. 2023 - Present
-Under the supervision of Dr. Mohammad Atari *UMass, Remote*
- Applications of NLP in the field of Psychology, with a specific emphasis on crafting computational psychological tools and assembling comprehensive Persian psychological datasets.

Link prediction in dynamic graphs Sep. 2022 – Jan. 2023
-Under the supervision of Dr. Sadegh Aliakbary *SBU, Tehran, Iran*
- Link prediction in dynamic graphs via Autoencoders and Siamese Networks.

Artificial intelligence intern Jun. 2022 – Sep. 2022
-Under the supervision of Dr. Dara rahmati *IPM, Tehran, Iran*
- Improving the performance of transformers using middle-level programming languages.
- At the Institute for Research in Fundamental Sciences (IPM).

Software defect prediction via software visualization Sep. 2021 – Jun. 2022
-Under the supervision of Dr. Mojtaba Vahidi-Asl *SBU, Tehran, Iran*
- An end-to-end model for Software defect prediction using CNNs.

Parkinson's Disease Diagnosis Jun. 2021 – Sep. 2021
-Under the supervision of Dr. Armin Salimi-Badr *SBU, Tehran, Iran*
- An interpretable classifier using an interval type-2 fuzzy neural network for detecting patients suffering from Parkinson's Disease (PD) based on analyzing the gait cycle is presented.

Persian Handwriting Recognition Oct. 2020 – Jan. 2021
-Under the supervision of Dr. Hamed Malek *SBU, Tehran, Iran*
- Proposed Fast Fourier Convolutional Recurrent Network (FFCRNN).

Work Experience

Machine Learning Engineer (Prompt Engineer) May. 2023 – Sep. 2023
-In the data science team *Wallex Co., Tehran, Iran*
- Building an AI financial assist with ChatGPT using prompt engineering.

Back-end Engineer Feb. 2023 – Aug. 2023
-In the data engineering team *Behsa Co., Tehran, Iran*
- Implementing an API and a pipeline for data using Spring.

Teaching experience

Teaching Assistant
Member of Teaching-Assistant Team

—Embedded Real-time Systems (Team Leader) | *2 Semester* Spring 2023
—Machine Learning (Graduate course) | *1 Semesters* Fall 2022
—Introduction to Machine Learning | *1 Semester* Fall 2022
—Fundamentals of Robotics (Team Leader) | *1 Semester* Spring 2022
—Digital Circuit Design | *1 Semester* Fall 2021
—Computer Architecture (Team Leader) | *2 Semesters* Spring 2021 - Spring 2022
—Advanced Programming (Team Leader) | *2 Semesters* Spring 2020 - Spring 2021
—Microprocessors and Assembly Language (Team Leader) | *3 Semesters* Winter 2020 - Spring 2022
—Introduction to Programming | *1 Semester* Fall 2019

Projects

Next frame prediction | *Python, PyTorch, Pandas* 2023
- Predicting the next frame of a video using CNNs and LSTMs.
- Increasing performance by adding the attention mechanism.

Sentiment Analysis | *Python, Pandas, hazm, Numpy* 2022
- Classifying comments on products into two classes via Ensemble learning.

Online food ordering and delivery platform | *Golang, MongoDB* 2021
- Classifying comments on products into two classes via Ensemble learning.

AI-based Othello | *Python, Tkinter* 2021
- Single-player Othello implementation using classic AI algorithms.

Robot motion planning | *Python, Webots* 2021
- Implementing Bug algorithms for robot wall following and motion planning.

Persian Handwriting Recognition | *Python, PyTorch, Yolov5* 2020
- Using YOLOv5 and FFCRNN model to perform object detection on handwriting images.

Certifications

Natural Language Processing with Classification and Vector Spaces | *Certificate* Coursera
Natural Language Processing with Probabilistic Models | *Certificate* Coursera
Applied Social Network Analysis in Python | *Certificate* Coursera
Pandas | *Certificate* Kaggle
Geospatial Analysis | *Certificate* Kaggle
Introduction To Data Science in Python | *Certificate* Coursera
Structuring Machine Learning Projects | *Certificate* Coursera
Sequence Models | *Certificate* Coursera
Convolutional Neural Networks | *Certificate* Coursera
Deep Learning Specialization | *Certificate* Coursera
Blockchain Basics | *Certificate* Coursera
Machine Learning | *Certificate* Coursera
Neural Networks and Deep Learning | *Certificate* Coursera

Selected Courses

Graduate Courses

- Deep Learning | A+

Undergraduate Courses

- Machine Learning | A+
- Artificial Intelligence and Expert Systems | A
- Fundamentals of Robotics | A+
- Advanced Programming | A+
- Software Hardware Co-design | A+
- Embedded and Real time Systems | A+
- Computer Architecture | A+

Skills

Programming Languages: Python, Golang, Java, C/C++, SystemVerilog, VHDL
Machine Learning Libraries: PyTorch, Tensorflow, Scikit-learn, Pandas, Numpy, NLTK
Languages: Persian (native), English (Advanced — TOEFL SCORE: 111/120)
Theoretical: Linear Algebra, Statistics
Miscellaneous: Git, MongoDB