

# Mohammad “Matt” Namvarpour

[halfingwizard.me](mailto:halfingwizard.me) | [mnamvarpour@gmail.com](mailto:mnamvarpour@gmail.com) | [linkedin.com/in/matt-namvarpour](https://www.linkedin.com/in/matt-namvarpour)

## EDUCATION

---

### Drexel University

*PhD in Information Science*

Philadelphia, PA

2023-Present

- Notable Courses: Human-AI interactions, Foundations of Human-centered Computing

### K. N. Toosi University of Technology

*Master of Artificial Intelligence*

Tehran, Iran

2020-2022

- Thesis: Speech emotion recognition using neural attention-based architectures
- Notable Courses: Machine Learning, Neural Networks, Pattern Recognition, Natural Language Processing, Speech Processing
- GPA: 18.15/20 (4/4)

### Iran University of Science and Technology

*Bachelor of Mechanical Engineering*

Tehran, Iran

2016-2020

- GPA: 15.97/20 (3.2/4)

## RESEARCH INTERESTS

---

**Conversational User Interface (CUI) Design**  
**Human-AI Interaction**  
**Machine Learning**  
**Natural Language Processing**

## PUBLICATIONS

---

### Uncovering Contradictions in Human-AI Interactions

*27th ACM CSCW*

November 2024

*Conference proceeding*

- Namvarpour, M., Razi, A.
- DOI: 10.1145/3678884.3681909
- Analyzed Replika chatbot reviews through the lens of Activity Theory, uncovering systemic contradictions between user expectations and chatbot behavior. Identified misaligned objectives, insufficient safety measures, and user burden in training the AI. Findings inform ethical design improvements, emphasizing AI alignment, clearer objectives, and robust safety protocols to enhance chatbot-user interactions.

### Apprentices to Research Assistants: Advancing Research with Large Language Models

April 2024

*LLMs as Research Tools: Applications and Evaluations in HCI Data Work, CHI 2024 Workshop*

*Workshop Paper*

- Namvarpour, M., Razi, A.
- arXiv:2404.06404
- Conducted a comprehensive literature review and experiments to assess the potential of Large Language Models (LLMs) in research. Identified benefits such as cost-effectiveness and efficiency, alongside challenges like prompt tuning, biases, and subjectivity. Proposed strategies to mitigate these challenges, including prompt optimization and integrating human expertise. Contributed to the dialogue on the responsible application of LLMs in research.

### Exploring the Potential of Wav2vec 2.0 for Speech Emotion Recognition

*The Journal of Supercomputing, Volume 80, Issue 16*

July 2024

*Research Article*

- Nasersharif, B., Namvarpour, M.
- DOI: 10.1007/s11227-024-06158-x
- Proposed a Dimension Reduction Module (DRM) for Wav2vec 2.0 to enhance speech emotion recognition by leveraging classifier combination and attention-based feature fusion. Achieved state-of-the-art unweighted accuracies of 94.80% on EMODB, 74.00% on IEMOCAP, and 80.60% on ShEMO. Findings provide insights into applying self-supervised learning for robust emotion recognition.

## PROJECTS

---

### **Shereno: A Dataset of Persian Modernist Poetry**

December 2021 - January 2022

#### *Dataset*

- Available on Kaggle: [kaggle.com/datasets/elhamaghakhani/persian-poems](https://kaggle.com/datasets/elhamaghakhani/persian-poems)
- Web scraped from shereno.com utilizing the beautiful soup library, this collection of Persian modernist poetry includes over 4000 poems by Iranian contemporary poets. Each poem's metadata, including the title, author, and title of the book, has also been scraped.
- Created in collaboration of Ms. Elham Aghakhani, AI Student at K.N. Toosi University

### **Persian Questions Dataset**

December 2020 - February 2021

#### *Dataset*

- Available on Kaggle: [kaggle.com/datasets/halflingwizard/persian-questions](https://kaggle.com/datasets/halflingwizard/persian-questions)
- A set of 600 simple Persian questions in 4 different categories that were hand crafted with the intention of teaching a voice assistant.
- Created in collaboration of Ms. Fatemeh Naderi, CE Student at Ferdowsi University of Mashhad

### **Persian (Farsi) Intent Classification and Slot Filling**

October 2020 - January 2021

#### *Deep learning model*

- Github Repo: [github.com/HalflingWizard/FA-Intent-Classification-and-Slot-Filling](https://github.com/HalflingWizard/FA-Intent-Classification-and-Slot-Filling)
- A Joint Model for Intent Classification and Slot Filling in Persian Language using BERT. The Keras library was used to build the neural network, and HuggingFace was used to load the ParsBERT language model, which is the Persian equivalent of the BERT language model.

## LICENSES & CERTIFICATIONS

---

### **IELTS Academic Training (Overall Band Score: 8.0)**

November 2021 - November 2023

#### *IELTS Official*

- Credential ID: 21IR010182NAMM120A
- Listening: 8.5
- Reading: 9.0
- Writing: 7.5
- Speaking: 7.0

### **Deep Learning: Applications & Tools**

March 2021

#### *IEEE Iran section*

- Credential ID: 147489
- Workshop held in conjunction with 26th Computer Society International Computer Conference
- Covered topics: Review and introduction of various areas of deep learning, including machine vision, natural language and sound processing, GAN models and deep reinforcement learning systems

### **Deep Learning Specialization**

September 2020

#### *Coursera*

- Credential ID: 89JQ3X8BNLWQ
- Composed of 4 courses: 1- Neural Networks and Deep Learning, 2- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization, and Optimization, 3- Structuring Machine Learning Projects, 4- Convolutional Neural Networks, 5- Sequence Models

### **Visual Elements of User Interface Design**

May 2020

#### *Coursera*

- Credential ID: WWH99Z7GZHBD
- Part of the UI / UX Design Specialization
- Centered on creating and communicating meaning through the use of color, typography, and imagery to make interfaces work clearly and effortlessly, which is part of an interface designer's skill set.

## HOBBIES

---

### **YouTube Channel (HalflingWizard)**

April 2021 - Present

#### *YouTube*

- Channel link: [youtube.com/c/HalflingWizard](https://youtube.com/c/HalflingWizard)
- Channel contains videos about artificial intelligence, machine learning, and deep learning.

**LG Global Challenger Competition 2018 Finalist**

August 2018

*LG Electronics DFZE, Tehran Liaison Office*

- Research Expedition to China funded by LG Electronics DFZE, Tehran Liaison Office