

# Zahra Habibzadeh

RESEARCH ASSISTANT

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## Education

### University of Tehran

Tehran, Iran

M.Sc. IN ARTIFICIAL INTELLIGENCE AND ROBOTICS

2020 - 2023

- Thesis: Extracting values and attitudes from social network data: A case study assessing users' satisfaction with their partner
- Overall GPA: 18.64/20 (4/4)

### University of Mazandaran

Babolsar, Iran

B.S. IN COMPUTER ENGINEERING

2012 - 2016

- Thesis: Designing a new article site using PHP and SQL
- Overall GPA (Last two years): 4/4 last two years
- 2nd Rank among graduated bachelor students based on overall GPA out of 70 students

## Research Interests

<b>Computational social science</b>	Behavioral Analysis
<b>Natural Language Processing</b>	Transformers, LLMs
<b>Data Mining</b>	Text Mining, Sentiment Analysis
<b>Deep Learning</b>	Recurrent Neural Networks in Finance

## Research Experience

### Research Assistant

Tehran, Iran

SOCIAL NETWORKS LAB, UNIVERSITY OF TEHRAN

2021 - present

- Working with social network data to derive valuable insights into human behavior regarding social interactions.
- Developing a new approach to evaluate user contentment in their relationship by analyzing Twitter data.
- Comparing different methods for the Influence Maximization Problem in Social Networks in a systematic review. (Link)

## Publications

### Extracting values and attitudes from social network data

Computational social science

Z.HABIBZADEH, M.ASADPOUR

2023

- Preparing to submit

## Teaching Experience

### Mentor

HooshBuz Summer School

UNIVERSITY OF TEHRAN, TEHRAN, IRAN

2022-2023

- Data Analytics, Machine Learning, and Text Mining
- Group collaboration with 7 other mentors to educate 80 students during 14 workshops on Data Analytics, Machine Learning, and Text Mining.

### Statistical Inference Teaching Assistant

Dr. Behnam Bahrak

SCHOOL OF ELECTRICAL AND COMPUTER ENGINEERING, COLLEGE OF ENGINEERING, UNIVERSITY OF TEHRAN, TEHRAN, IRAN

2022

- Defining an advanced practical and theoretical assignment.

### Machine Learning Teaching Assistant

Dr. Mohammad Reza Abolghasemi

SCHOOL OF ELECTRICAL AND COMPUTER ENGINEERING, COLLEGE OF ENGINEERING, UNIVERSITY OF TEHRAN, TEHRAN, IRAN

2022

- Defining an advanced practical and theoretical assignment for more than 100 students.

### Data Analysis Teaching Assistant

Dr. Mohammad Amin Sadeghi

SCHOOL OF ELECTRICAL AND COMPUTER ENGINEERING, COLLEGE OF ENGINEERING, UNIVERSITY OF TEHRAN, TEHRAN, IRAN

2021-2022

- Defining 3 advanced projects and 3 quizzes for more than 70 students.

## Projects

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### Big Data and Data Analytics Projects (Link)

- Launching a real-time Big Data system for the analysis of online Persian Twitter data
- Using Apache Spark for Natural Language Processing, Log Mining, Graph Mining, and Stock Market tasks
- Analyzing a real dataset using the R programming language
- Investigating the main reason for the sales decline in a wood industry factory

### Social Networks Projects (Link)

- Examining the effect of combining economic and social analysis on the prediction of stock price fluctuations
- An analysis of Telegram channels related to the dollar and its price

### Deep Learning & Machine Learning Projects (Link)

- Deep Reinforcement Learning techniques for the Cartpole environment
- Generating music using Long Short-Term Memory (LSTM) networks
- Classifying images using Convolutional Neural Networks (CNNs)
- Detecting Parkinson disease using signals of speech data with ensemble learning

### Bio Inspired Computing Projects (Link)

- Developing L-System Grammar
- Implementing bio-inspired optimization methods to enhance algorithm performance for complex problem-solving

## Skills

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### Theoretical Experience

### Programming Languages

### Libraries and Frameworks

### Databases, Datastores, and Tools

### Big Data Platforms and Tools

### Visualization Tools

### CI/CD Tools

### Container Platforms

### Other Tools and Skills

Machine Learning, Text Mining, Deep Learning, Design of Algorithms, Big Data, Data Structures, and Databases

Python, R, HTML, CSS, JavaScript, and C++

PyTorch, TensorFlow, Keras, NumPy, SciPy, Scikit-learn, Pandas, BeautifulSoup, and NetworkX

MongoDB, Apache Cassandra, Elasticsearch, ClickHouse, Neo4j, and SQL Server

Apache Spark, Apache Superset, Apache Hadoop, Apache Kafka, Apache Hive, Kibana, and DBeaver

Matplotlib, Seaborn, Plotly, Gephi, Geoplotlib, and Houdini

Git

Docker

LaTeX, MS Office, and Adobe Photoshop

## Languages

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English

Fluent

Persian

Native

## Academic Courses

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Bio Inspired Computing, 19.4/20

2022

Advanced Robotics, 18.77/20

2022

Social Networks, 18/20

2021

Neural Networks and Deep Learning, 18.06/20

2021

Massive Data Analysis and Systems (Big Data), 19.5/20

2021

Statistical Inference, 17.8/20

2021

Machine Learning, 19.3/20

2020

Data Analysis, 17.75/20

2020