

Behzad Shayegh Boroujeni

University of Tehran, Tehran, Iran

My interest in natural language processing has encouraged me to gain knowledge and experience in this field. Also, I have work experience in feature extraction. Furthermore, I have good knowledge of algorithms, which positively affects my work experiences. In addition to my statistical knowledge, I am familiar with neural networks.

Education

2017-2022 (EXPECTED)

Bachelor of Science

Major in Computer Engineering
Software Engineering branch,
School of Electrical and Computer
Engineering, University of Tehran
GPA : 3.93/4 - 18.41/20 (till now)

Minor in Computer Science
School of Mathematics, Statistics and
Computer Science, University of Tehran
GPA : 4/4 - 19.73/20 (till now)

Relevant Courses

(*: Graduate Course)

	Grade/20
Computational Neuroscience *	19.75
Assoc.Prof. Mohammad Ganjtabesh	
Natural Language Processing *	19.1
Assoc.Prof. Hesham Faili	
Reinforcement Learning *	20
Prof. Majid Nili	
Statistical Machine Learning *	19.5
Assoc.Prof. Zahra Rezaei Ghahroodi	
Artificial Intelligence	20
Assis.Prof. MohamadAmin Sadeghi	
Statistical Methods	20
Hasan Misaei	
Engineering Probability and Statistics	19.7
Assis.Prof. Behnam Bahrak	

Research Interests

Computational Neuroscience
↳ Spiking Neural Networks
Natural Language Processing
↳ Text Processing
Cybernetics
↳ Reinforcement Learning

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Web.: <https://behzadshayegh.github.io>

Projects

- 2021-NOW **Spiking Neural Networks Framework** Spiral
- Python Compu-Neuro SNN PyTorch
- A python package for spiking neural network simulation using PyTorch on cuda or CPU. This package tries to bring its design as close as possible to biological observations of how the nervous system functions. It will be placed on the official website of the University of Tehran's Computational Neuroscience Research Lab shortly.
- Supervisor: Assoc.Prof. Mohammad Ganjtabesh
- 2020-2021 **Persian Address to Postal-Code Converter** PAT
- Python NLP NLTK Persian
- Persian Address Tracer (PAT) is an intelligent system for converting Persian text of address to postal code. If you are not aware, it is worth mentioning that due to the special conditions in the Persian language and also the lack of standards in addressing in Iran, this is a difficult issue. As far as we know, the PAT system is the most successful and intelligent system available for this issue.
- Supervisor: Assis.Prof. MohamadAmin Sadeghi

Work Experience

- 2019-2020 **House Prices Estimation over Tehran** 4-Choob
- Python Numpy Shapely PostgreSQL Q-GIS PostGIS
- Map-Processing
- 4-Choob was a project aimed at automatic house price estimation over Tehran. The result of this project is a housing sales organization whose website is linked. We were the first members to work on this project and I was given the task of extracting features from multiple sources. The result was the extraction of more than 400 efficient price forecasting features. I used vary tools and techniques as there were very different tasks with different concerns; Such as map processing or optimization.
- Supervisor: Assis.Prof. MohamadAmin Sadeghi

Books

- 2020-NOW **Discrete Mathematics Persian Book** OpenBookshelf
- LaTeX Discrete-Mathematics
- I am the leader of a group of volunteers who are writing an Persian educational book on discrete mathematics. It is open-source and free for all. It is a charity act and everyone contributes without any expectations. FIPA will be registered soon.

Assoc.Prof. Siamak Mohammadi

Teaching Assistance Experience

FALL 2021	Engineering Probability and Statistics (Head Teaching Assistant)	Assis.Prof. Behnam Bahrak ↗
SPRING 2021		
FALL 2020	Discrete Mathematics (Head Teaching Assistant)	Assoc.Prof. Siamak Mohammadi ↗
SPRING 2020		
SPRING 2021	Natural Language Processing (Graduate Course)	Assoc.Prof. Heshaam Faili ↗ Assis.Prof. Yadollah Yaghoobzadeh ↗
SPRING 2020	Artificial Intelligence	Dr. Hakimeh Fadaei ↗
FALL 2019	Engineering Probability and Statistics	Assis.Prof. Behnam Bahrak ↗
SPRING 2019	Discrete Mathematics	Assoc.Prof. Siamak Mohammadi ↗
FALL 2019		
FALL 2019	Data Structures and Algorithms	Assoc.Prof. Heshaam Faili ↗
FALL 2019	Introduction to Computing Systems and Programming	Assoc.Prof. Manouchehr MoradiSabzevar ↗
FALL 2018	Engineering Programming	Dr. Noushin Karimian ↗
SPRING 2018		

Workshop Mentoring

SPRING 2020	Python Tutorial	Amirkabir University
WINTER 2020	Data Science Winter School	Khatam University
WINTER 2020	Data Science Winter School	University of Tehran
SUMMER 2019	Summer of Code, AI Branch ↗	University of Tehran

Written Contents

2021	Applied statistics tutorial in R ↗ <ul style="list-style-type: none">- My Role: Leader- Usage: Engineering Probability and Statistics Course, School of Electrical and Computer Engineering, University of Tehran	Assis.Prof. Behnam Bahrak ↗
2020	Common Mistakes in Discrete Mathematics ↗ <ul style="list-style-type: none">- My Role: Supervisor- Usage: Discrete Mathematics Course, School of Electrical and Computer Engineering, University of Tehran	Assoc.Prof. Siamak Mohammadi ↗
2020	Python Tutorial Exercises ↗ <ul style="list-style-type: none">- Usage: Python Tutorial in Amirkabir University	
2018	Extra Solutions And Codes (C++) Booklet ↗ <ul style="list-style-type: none">- Usage: Computer Programming Course, Faculty of Engineering Sciences, University of Tehran	Dr. Noushin Karimian ↗

Python Packages

2021	Add-On Class ↗
2021	Construction Requirements Integrator ↗
2021	Matplotlib Dashboard ↗
2021	Constant Properties Protector ↗

Skills

	Programming Languages	Python Libraries & Frameworks	Software & DBMSs	Other Tools & Frameworks
Expert	Python, TeX, SQL	Pandas, Numpy, Spiral	Git, LaTeX, PostgreSQL	Spreadsheet, Markdown
Proficient	R, Bash	PyTorch, Matplotlib, NLTK, Scikit-Learn	MySQL, PostGIS	HTML, CSS, Jupyter, Colab
Familiar	C++, C, Java, Verilog, JavaScript	Keras, BindsNET, Shapely, SciPy.stats	Q-GIS	ReactJS, VewJS
Beginner	MATLAB, C#	Sympy	MongoDB, Elasticsearch	Spring

Notable Course Projects

SPRING 2021	Text Representation using SNNs (to be continued) ↗	Computational Neuroscience Assoc.Prof. Mohammad Ganjtabesh ↗
SPRING 2021	Face Representation using Convolutional SNNs ↗	Natural Language Processing Assoc.Prof. Heshaam Faili ↗
SPRING 2020	IMDB Spam Ditection using Bert and Elmo ↗	Natural Language Processing Assoc.Prof. Heshaam Faili ↗
SPRING 2020	POS Tagging using RNN and HMM ↗	Natural Language Processing Assoc.Prof. Heshaam Faili ↗
SPRING 2020	Fa2En and En2Fa Neural Machine Translation ↗	Natural Language Processing Assoc.Prof. Heshaam Faili ↗
SPRING 2020	Feed Forward Neural Network Language Model ↗	Natural Language Processing Assoc.Prof. Heshaam Faili ↗
SPRING 2020	Movie Reviews Semantic Analysis using Statistical Language Models ↗	Natural Language Processing Assoc.Prof. Heshaam Faili ↗
SPRING 2020	Persian News Classification using Statistical Language Models ↗	Natural Language Processing Assoc.Prof. Heshaam Faili ↗
SPRING 2019	Emails Spam Detection using Bag of Words ↗	Artificial Intelligence Assis.Prof. MohamadAmin Sadeghi ↗
SPRING 2019	Image Classification (CIFAR-10) using CNNs ↗	Artificial Intelligence Assis.Prof. MohamadAmin Sadeghi ↗
SPRING 2019	Image Classification (MNIST and CIFAR-10) using ML approachs ↗	Artificial Intelligence Assis.Prof. MohamadAmin Sadeghi ↗
SPRING 2019	House Price Estimation using Neural Networks ↗	Artificial Intelligence Assis.Prof. MohamadAmin Sadeghi ↗
Hands-On Series		
SPRING 2021	Understand the parameters in SNNs (9 Parts) ↗	Computational Neuroscience Assoc.Prof. Mohammad Ganjtabesh ↗
FALL 2020	Apply well-known RL algorithms on simulated problems (5 Parts) ↗	Reinforcement Learning Prof. Majid Nili ↗
FALL 2020	Statistical analysis on datasets and ML models performance(5 Parts) ↗	Statistical Machine Learning Assoc.Prof. Zahra Rezaei Ghahroodi ↗

Languages

Persian	Native
English	Fluent
↳ IELTS Score: Overall: 6.5		
R: 6.5 L: 6.5 S: 6.5 W: 6.5		

References