Arghavan Irankhah

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Education

Ferdowsi University of Mashhad 2019-2022

M.Sc. in Computer Engineering, ***CGPA: 3.88/4*** *(18.78/20),* ***Last Year CGPA: 4/4*** *(19.77/20)*

- **Thesis:** Intelligent demand-side management by predicting household energy consumption based on deep learning networks

Ferdowsi University of Mashhad 2012-2017

B.Sc. in Computer Engineering, ***Last Year CGPA: 3.23/4*** *(17.24/20)*

- **Thesis:** Implementing an intelligent system for meeting management written in JAVA-Android Studio

Research Interest

Machine Learning | **Data Analysis** | **Deep Learning** | **Network Science**

Publications

12th International Conference on Computer and Knowledge Engineering (ICCKE) Dec 2022

A parallel CNN-BiGRU network for short-term load forecasting in demand-side management

- Authors: **Arghavan Irankhah**, Sahar Rezazadeh, Mohammad Hossein Yaghmaee Moghaddam, Sara Ershadi Nasab, Mohammad Alishahi

The 7th International Conference On Signal Processing And Intelligent Systems,(ICSPIS) Nov 2021

Hybrid Deep Learning Method Based on LSTM-Autoencoder Network for Household Short-term Load Forecasting

- Authors: **Arghavan Irankhah**, Sahar Rezazadeh, Mohammad Hossein Yaghmaee Moghaddam, Sara Ershadi Nasab

Teaching

TA at Ferdowsi University of Mashhad Winter-2021

Performance Evaluation of Computer Systems and Networks, Prof. Mohammad Hossein Yaghmaee Moghaddam

- Teaching Course Materials every week to students
- Designed weekly 5-10 assignments every week
- Co-designed four quizzes and a final exam
- Solving problems and grading quizzes and assignments

Work Experience

AI Developer January-August 2022

Internship | Mashhad Electricity Power Distribution Company *Full-time*

- Implementing a deep learning-based parallel model for predicting energy.
- Analyzed the five-year energy consumption data of Mashahad residential consumers.
- Research on energy management methods with AI.
- Proposed novel parallel method consists of GRU and CNN models.

Data Analyst Summer 2021

Internship | AhdSoft *Part-time*

- Implement text representation methods.
- Convert a Persian text to semantic vectors.
- NLP text pre-processing using FastText and Word2vec.
- Learn common methods of finding similarity between two documents (Text Similarity).

Research Assistant October 2019- September 2022

IP-PBX Lab *Full-time*

- Researching and developing on efficient deep learning models to prediction.
- Writing two conference papers and receiving the best paper certification award.

Honors & Awards

BEST paper award at ICCKE conference. Nov 2022
12th International Conference on Computer and Knowledge Engineering.

Ranked 3rd among M.Sc. computer engineering students Sep 2022
Ferdowsi University of Mashhad

Received full government fellowship for both bachelor and master studies. 2012, 2019
Ferdowsi University of Mashhad

Grade satisfactory of thesis Sep 2022
Excellent (A+) with grade 19.5/20 for M.Sc.

Projects

Implementing hybrid deep learning method for short-term load forecasting. 2021
Implemented in Python, Jupyter Notebook, Sikit-Learn, Pandas, Numpy.

Implementing Energy Consumption Prediction Models by using K-NN, ANN and SVM. 2021
Implemented in Python, Jupyter Notebook, Sikit-Learn, Pandas, Numpy.

Implementing an intelligent Android application. 2017
Managing appointments between students and professors | implemented in JAVA, Android Studio- MySql.

Implementing uninformed search and informed search algorithms. 2016
BDS, UCS, IDS, DFD, BFS and A, IDA*, RBFS, SMA* on Pac-Man game | Implemented in JAVA.*

Programming & Computer Skills

Languages: Python,JavaScript, HTML/CSS, JAVA, Sql
Frameworks: WordPress | Elementor | Woocomerce
Developer Tools: Jupyter Notebooks, Git, VS Code.
Libraries: TensorFlow, Keras, Pandas, Numpy, Scikit-learn, Matplotlib.
Design Tools: Figam, Adobe Xd
Familiar with: LATEX, CCNA, Linux (Debian distribution), Word2vec, Fasttext.

Languages

- English : Fluent (TOEFL to be held on 2023)
- Persian: Native

Online Courses

Introduction to Deep Learning May 2022
Authorized by MIT University

Data Analysis with Python [see certificate] Dec 2022
Authorized by IBM and offered through Coursera

Python Programming [see certificate] Dec 2022
Authorized by Meta and offered through Coursera

Deep Learning Specialization [see certificate] Dec 2022
Authorized by DeepLearning.AI and offered through Coursera

- Neural Networks and Deep Learning.
- Convolutional Neural Networks.
- Sequence Models
- Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization
- Structuring Machine Learning Projects

DeepLearning.AI TensorFlow Developer Professional Certificate [see certificate] Dec 2022
Authorized by DeepLearning.AI and offered through Coursera

- Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning.
- Convolutional Neural Networks in TensorFlow
- Natural Language Processing in TensorFlow
- Sequences, Time Series and Prediction

References

Prof. Mohammad Hossein Yaghmaee Moghaddam, Full professor of Ferdowsi University of Mashhad.
Emails: yaghmaee@ieee.org | hyaghmae@ferdowsi.um.ac.ir

Dr. Haleh Amintoosi, Associate Professor at Ferdowsi University of Mashhad.
Emails: haleha@cse.unsw.edu.au | h.amintoosi@gmail.com

Dr. Behshid Behkamal, Assistant Professor at Ferdowsi University of Mashhad.
Emails: behkamal@um.ac.ir