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Ehsan Hoseinzade

Education

2019-present **Ph.D. in Computer Science**, *Data Mining*, Simon Fraser University.
GPA – 4.08/4.33, Supervisor: Dr.Ke Wang

2016-2019 **M.Sc. in Computer Science**, *Decision Science and Knowledge Engineering*, University of Tehran.
GPA: 18.93/20 - Ranked 1st according to GPA
Thesis: Using Deep Learning in Financial Markets Prediction (20/20)
Supervisor: Dr. Saman Haratizadeh

2012-2016 **B.Sc. in Computer Science**, Shahid Beheshti University.
GPA – 17.44/20 - Ranked 3rd according to GPA

Publication

Hoseinzade E, Haratizadeh S. "CNNpred: CNN-based Stock Market Prediction Using Several Data Sources", *Expert systems with applications*, PDF, Dataset.

Hoseinzade E, Haratizadeh S, Khoeini A."U-CNNpred: A Universal CNN-based Predictor for Stock Markets", PDF.

Khosrobeygi Z, Veisi H, Hoseinzade E, Shabanian H . "Persian Optical Character Recognition Using Deep Bidirectional Long Short-Term Memory", *Applied Sciences*, PDF.

Khoeini A, Haratizadeh S, Hoseinzade E . "Representation Extraction and Deep Neural Recommendation for Collaborative Filtering", PDF.

Experience

Research Assistant

2019-present As a member of Database and Data Mining Lab, I have been working on Deep Learning, Graph Neural Networks, Transformer-based language Models and their applications in semantic type annotation in tables.

2017-2019 As a member of KDD Lab, I worked on Deep Learning algorithms, especially CNN, and their applications in financial markets and recommender systems.

Teaching Assistant

Spring 2022 **Computational Data Science**, *Undergraduate*.
Spring 2021 **Data Structure and Algorithms**, *Undergraduate*.
Fall 2019 **Design and Analysis of Algorithms**, *Graduate*.
Spring 2019 **Mining of Massive Datasets**, *Graduate*.
Fall 2018 **Machine Learning**, *Graduate*.
Spring 2018 **Mining of Massive Datasets**, *Graduate*.
Fall 2017 **Machine Learning**, *Graduate*.
Fall 2017 **Fundamentals of Soft Computing**, *Graduate*.

Projects

Future sales prediction of various items in different shops, *Kaggle (top %15)*.

Prediction of Dow-Jones Stocks Using Genetic Algorithm and Huber Regression, *Outperformed a paper*.

Prediction of stock markets using semi-supervised models and deep learning.

Forecasting Dow-Jones Industrial Average using text mining, *Kaggle*.

Prediction of buying and selling probabilities of stocks in Tehran Stock Exchange, *Tadbir Brokerage*.

Prediction of Iranian presidential election (2017), *1.5M posts of social networks*.

Forecasting return of commodities in an online retailer, *Data Mining Cup*.

Honors and Awards

2019-2022 Graduate Fellowship, Simon Fraser University ($\times 4$), Canada

2021 Helmut & Hugo Eppich Family Graduate Scholarship, Canada

2019 Ranked 7^{th} in DataDays competition among 530 teams, Sharif University of Technology, Iran

2018 Full scholarship of the Big Data Economics summer school, Tehran Institute for Advanced Studies

2016 Ranked 10^{th} in National Graduate Entrance Examination in Computer Science (Decision Science & Knowledge Engineering) among 1184 students, Iran

2014 10^{th} place in Asia Regional ICPC (International Collegiate Programming Contest) among 101 qualified teams, Asia Tehran Site

Selected Certificates

2019 **Sructuring Macine Learning Projects**, deeplearning.ai, See Certificate

2019 **Improving Deep Nueral Networks**, deeplearning.ai, See Certificate

2019 **Neural Networks and Deep Learning**, deeplearning.ai, See Certificate

2017 **Machine Learning**, Stanford University, See Certificate

2017 **Neural Network for Machine Learning**, University of Toronto, See Certificate

2017 **Statistical Learning**, Stanford University, **with distinction**, See Certificate

2017 **Deep Learning 101**, IBM, See Certificate

2016 **Data Science Foundations** - Level 1, IBM, See Certificate

Volunteer

External Reviewer IEEE Big Data 2019, ICDE 2020, KDD 2020, ICDM 2020, WSDM 2020

Staff NeurIPS 2019, ICML 2020

Staff ICPC (International Collegiate Programming Contest) Pacific Northwest Regional Contest

Skills

Programming Languages: Python, Java, C++, R, MATLAB

Machine Learning: Pytorch, Keras, Tensorflow, Sklearn, NLTK, Pandas