Mersad Esalati

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"Be the change that you want to see in the world."

Education

University of Tehran
Tehran, Iran

MASTER OF SCIENCE IN ARTIFICIAL INTELLIGENCE AND ROBOTICS
Sep. 2020 - PRESENT

- Thesis Title: **Unsupervised Parallel Corpus Creation using eBooks for Persian-English**
- Overall: **18.84/20** (Overall GPA: **4/4**).
- Selected Courses:
    - Machine Learning **19.30/20**
    - Data Analysis **17.75/20**
    - Neural Networks and Deep Learning **19.72/20**
    - Natural Language Processing **18.50/20**
    - Massive Data Analysis and Systems **18.50/20**
    - Statistical Inference **18.80/20**

Ferdowsi University of Mashhad
Mashhad, Iran

BACHELOR OF SCIENCE IN COMPUTER ENGINEERING
Sep. 2015 - Jan. 2020

- Thesis Title: **Review TTS System with Focus on Tacotron2**
- Overall: **17.51/20** (Overall GPA: **3.57/4**).
- Selected Courses:
    - Artificial Intelligence and Expert Systems: **19.75/20**
    - Data Structures and Algorithms: **18.30/20**

Field of Interest

RESEARCH

- Machine Leaning & Deep Learning
- Natural Language Processing
- Massive Data Analysis and Systems

APPLICATION

- Machine Translation
- Computational Neuroscience

Research Experience

University of Tehran
Tehran, Iran

RESEARCHER AT NLP LAB
Jun. 2021 - PRESENT

- Neural Machine Translation
- Multilingual Sentence Alignment

Teaching Experience

HooshBaaz Summer School
Tehran, Iran

MENTOR
Aug. 2022 - Sep. 2022

- Educating Students During 14 Workshops on Data Analytics and Machine Learning.

University of Tehran
Tehran, Iran

TEACHER ASSISTANT
Jun. 2021 - PRESENT

- **Neural Networks and Deep Learning**, presented by Dr. A. Kalhor.
- **Massive Data Analysis and Systems**, presented by Dr. M. J. Dousti.
- **Data Analysis**, presented by Dr. M. A. Sadeghi and Dr. M. R. Abolghasemi Dehghani.

Ferdowsi University of Mashhad *Mashhad, Iran*

Teacher Assistant *Sep. 2015 - Jan. 2020*

- **Artificial Intelligence**, presented by Dr. S. Abrishami.
- **Data Structures**, presented by Dr. K. Ghiasi-Shirazi.
- **Microprocessor and Assembly Language**, presented by Dr. Y. Sedaghat.

Work Experience

Faraazin *Tehran, Iran*

Machine Learning Engineer *Jan. 2022 - PRESENT*

- Develop Pipeline for Parallel Corpus Creation via Sentence Alignment
- Train and Deploy Various Neural Machine Translation Models for Different Domain

Ferdowsi Cloud Laboratory *Mashhad, Iran*

Back-end Developer *Jun. 2019 - Jun. 2017*

- Develop Server for Working with Openstack Services
- Deploy Openstack Cluster

Rajman Information Structures *Mashhad, Iran*

Android Developer *Jul. 2018 - Dec. 2019*

- Worked on "Neshan Navigator" android client.
- Develop Bus Live Location Feature
- Develop Multi Language Feature

Academic Project Highlights

LunarLander *Tehran, Iran*

Course project of Reinforcement Learning *Dec. 2021*

- Solve LunarLander environment using DQN model

Frozen Lake Path Planning *Tehran, Iran*

Course project of Reinforcement Learning *. 2021*

- Implement model-free algorithm Off-Policy MC, Q-Learning, SARSA, N-Step Tree Backup for solving frozen lake problem.

Neural Machine Translation (NMT) for Persian-English Translation *Tehran, Iran*

Course project of Natural Language Processing *May. 2021*

- Train transformer-based machine translation system using Fairseq/OpenNMT

Sentiment Analysis for Twitter Data using RNNs *Tehran, Iran*

Course project of Natural Language Processing *April. 2021*

- Fine-tune transformer-based different embedding models like BERT, ElMo for classification of tweets

Classify CIFAR10 Dataset using Neural Networks in Keras *Tehran, Iran*

Course project of Neural Network and Deep Learning *April. 2021*

- Build and tune Convolutional Neural Network hyper-parameters then use Data Augmentation methods for improve model
- Fine tune EfficientNet for classify CIFAR10 (Transfer Learning)

Detecting Parkinson disease from speech signal with ensemble learning *Tehran, Iran*

Course project of Machine Learning *Dec. 2020*

- Try dimensionality reduction using different method like PCA, LDA, auto-encoder and classify data using SVM and ensemble learning.

Solving a Board Game Based on Uninformed and Informed Search *Mashhad, Iran*

Course project of Artificial Intelligence and Expert Systems *May. 2018*

- Implemented Uninformed search algorithms (BFS, UCS, DFS and IDS) to solve the game.

Skills

Programming	Python, Java, Bash Script
Soft Computing	PyTorch, Keras
Big Data	Hadoop, Airflow, Kafka, Spark
DevOps	Linux, Docker
Development Tools	Git
Languages	Persian (native), English (fluent)