

# Mehrdad Sheikhjaberi

COMPUTER ENGINEER · DATA SCIENTIST

Tehran, Iran

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## Education

### AMIRKABIR UNIVERSITY OF TECHNOLOGY (Tehran polytechnic)

Tehran, Iran

BSc.COMPUTER ENGINEERING- IT

Sep. 2015 - now

- Cumulative GPA (via 136 passed units): 3.57 / 4
- GPA (selected courses): 4 / 4, including: Algorithm design, Data structure, Advanced programming, Database
- GPA (last 4 semester): 3.54 / 4

## Work Experience

### PUBLICATION ANALYSIS

Jan 2020 - now

NLP LAB AT AMIRKABIR UNIVERSITY

In this project, I started to implement my knowledge that I learned about data mining and natural language processing in an applicable project as a member of the NLP lab at Amirkabir university that belongs to an institute of ministry of science, named publication analysis (analysis of about 2 million articles). First, I changed the text to vector in some different ways (LDA, word2vec with three different lengths of vector, word2vec weighted TF-IDF, TF-IDF, doc2vec). Then, I trained six classification models for each vector. After that, I chose the best model by accuracy and used that model for labelling the unlabeled publications. Subsequently, I built an interface (front with react.js and backend with express.js) to use this project. I ran LDA with all publications and labelled each topic with the help of human resources. As a result, on the main page, people can choose category and year and the number of topics and main words and see the results that reached from averaging between selected topic's vectors of publications and its labelled topic. This project was presented for the first time in Persian publications and it is very helpful for analyzing the evolution of articles. All this processing was under the supervision of my professor DR. Momtazi (head of the NLP lab at Amirkabir University).

### WEB AND MOBILE DEVELOPER INTERN

Sep 2019 - Dec 2019

AMID RAYANEH SHARIF (ARSH) COMPANY

In this internship, I worked for EPFL university's mobile startup that was about children with disabilities. I started to learn about advance react native for mobile and some instructions about web programming and its principles and how applications (web and mobile) develop from beginning. This internship has improved my attitude about correct application developing.

### FINAL PROJECT

Aug 2020 - now

BACHELOR'S PROJECT

This project is about Implementation of mobile Interface for a machine learning algorithm for dictation (Persian language) named deep mind. Selected framework for front developing is react-native because it can give both of the android and IOS outputs.

## Selected Academic Projects

### DATA MINING

Jan 2020 - Jun 2020

IMPLEMENTATION OF CLASSIFICATION AND CLUSTERING ALGORITHMS

- Implementation of K-means clustering algorithm by python
- Implementation of Naïve Bayes Text Classification by python
- Implementation of image compression with kmeans clustering by python
- predicting the chance of cancellation hotel's booking by python

### ARTIFICIAL INTELLIGENCE

Sep 2018 - Jan 2019

IMPLEMENTATION OF CLASSICAL AND NON-CLASSICAL SEARCHES

Implementation of BFS, DFS, Simulated annealing, Hill Climbing, Genetic by python

### INTERNET ENGINEERING

Sep 2019 - Jan 2020

DEVELOPING AN ONLINE HOUSE RENT WEBSITE

Website is developed with react for front-end and express.js for back-end and mongoDB for database

### PRINCIPLES OF COMPILER DESIGN

Jan 2020 - Jun 2020

PROGRAMMING BY PYTHON

Implementation of Lexer and Parser by python

## ADVANCED COMPUTER PROGRAMMING

Jan 2017 - Jun 2017

### IMPLEMENTATION OF PROGRAMS BY JAVA

- Implementation of a graphical game (BattleShip-Online)
- Implementation of a simple image editor
- Implementation of a simple Encryption and encoding System

## SIGNALS AND SYSTEMS

Sep 2019 - Jan 2020

### MATLAB PROJECT

Recognizing men and women's voice and removing noise from voice with Fourier series.

## PRINCIPLES OF DATABASE DESIGN

Sep 2017 - Jan 2018

### ERD, MYSQL, QUERIES

Designing online shopping ERD and SQL database, Working with MYSQL and pertinent queries

## ALGORITHM DESIGN

Jan 2017 - Jun 2018

### PROGRAMMING BY JAVA

Dynamic programming for graph coloring problem

## Computer Architecture and design

Jan 2016 - Jun 2017

### PROGRAMMING BY VHDL

Basic Computer, Compiler, Cache, Pipeline

## Language Skills

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**Persian:** Native language.

**English:** Fluent.

## Technical Skills

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### Programming Languages:

Python3, Java, C/C++, SQL , VHDL (Hardware Description Language)

### Web and Mobile Technologies:

HTML5, CSS3, React-native, XML, React.js, JSON, Ajax, Express.js, Node.js

### Databases:

MySQL, PostgreSQL, MongoDB

### Software libraries and distributions:

Sklearn, Gensim, NLTK, Matplot, Pandas, Numpy, Polyglot, Networkx, Keras

### Miscellaneous:

Linux, Android Studio, ModelSim, Vivado Design Suite (Xilinx), NetSim, Orcad, Git, Wireshark, ssh, AdobeXD, I

## Research Interests

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- Natural Language Processing (NLP)
- Information Retrieval
- Data Analysis
- Deep Learning & Neural Network
- Machine Learning and AI