Ali Nazari

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Education

Amirkabir University of Technology — **Tehran, Iran**
B.Sc. Computer Engineering (GPA: 3.53/4) — *Oct. 2017 – Present*

- Thesis (In progress): Persian Poetry Generation using Deep Neural Networks

Alborz High School — **Tehran, Iran**
Mathematics (GPA: 19.86/20) — *Aug. 2013 – Sept. 2017*

Research Interests

- Natural Language Processing
- Machine Learning
- Deep Learning
- Data Mining
- Recommender Systems
- Artificial Intelligence

Research Experience

Poem Metre Detector | *Pytorch, NLP* — **May. 2021 - Present**

- Developing a sequence to sequence model to detect metre of persian poems
- Using an encoder-decoder architecture
- Under supervision of Prof. Zeinali

Work Experience

Data Scientist — **Mar. 2021 – Present**
Bale Messenger (A Social Payment Platform) — *Tehran, Iran*

- Participating in research and develop a banking QA chatbot to answer customers questions
- Using text similariy and text classification techniques to answer questions
- Working with different word embeddings like BERT and FastText

Front-end Developer — **Aug. 2020 – Mar. 2021**
Bale Messenger (A Social Payment Platform) — *Tehran, Iran*

- Developed a reactive web application with an MVI (Model-View-Intent) architecture
- Core member of new Bale messenger client which implemented in TypeScript
- Used modern front-end technologies like: ReactJS, RxJS, Redux, ...

Volunteer Experience

Chairman — **Mar. 2019 – Sep. 2020**
Students' Scientific Chapter of AUT-CE — *Tehran, Iran*

- Elected as a member and head of the management board by students of CE Department of Amirkabir University
- Managed to organize more than 40 events, talks, competitions, festivals, seminars and workshops
- Took part as an executive and technical commitee member and head of many conferences, workshops, festivals and competitions such as:
  - 19th Amirkabir University of Technology International Collegiate Programming Contest (AUT-ICPC) (Fall 2019)
  - 11th Amirkabir Linux Festival (Winter 2020)
  - 6th Amirkabir Programming League (APL 2019) (Spring 2019)
  - 1st Amirkabir Artificial Intelligence Summer Summit (AAISS 2019) (Summer 2019)

  to name a few.

Self Projects

Part of Speech Tagger | *Transformers, BERT, NLP* — **Winter 2021**

- A POS (Part-of-speech) tagger grammatically classifies the tokens (noun, verb, adjective...).
- My base model for this task is ParsBERT. It is a transformer-based model for Persian language understanding and a monolingual language model based on Google's BERT architecture.
- I've used Bijankhan Corpus for this task.

Toggl | *TypeScript, ReactJS, Redux* — **Summer 2020**

- Toggl is a time tracker developed with TypeScript and ReactJS
- You can start time entries with toggl and track or manage them
- This is a mobile-based client and connected to my real Toggl account through Toggl API

Technical Skills

Programming and Scripting Languages: Python, JavaScript, TypeScript, Java, HTML/CSS/SASS

Data and Machine Learning Tools: Pandas, Numpy, scikit-learn, Pytorch, Transformers

Web Frameworks and Databases: ReactJS, Redux, RxJS, NodeJS, Flask, SQL, PostgreSQL

Soft Skills: Humble, Teamwork, Patience, Accountability

Developer Tools: Git, Docker

Graphic Design: Adobe Photoshop, Adobe Illustrator, Adobe XD

Operation Systems: Linux, Windows

Notable Course Projects

Principles and Applications of Artificial Intelligence | *Python* **Autumn 2020**

- N-Gram Language Model: Predict poet using uni-gram and bi-gram models
- Classical Tree Search Algorithms: Solve Hanoi Towers problem using BFS, IDS, and A* algorithms

Data Mining | *Python, scikit-learn* **Autumn 2020**

- Linear Regression Model: Predict student mark on Student Performance data set using linear regression
- Decision tree (Classification): Predict survival on the Titanic data set using decision tree classifier and calculating information gain with Gini and entropy
- Naive Bayes and K-NN (Classification): Predict heart disease on heart disease data set using Naive Bayes and K-NN classifiers
- DBSCAN (Clustering): Cluster Covid-19 patients in Iran using DBSCAN algorithm
- Transform embedding vetors with PCA: Transform embedding vectors of GloVe (Global Vectors for Word Representation) to a 2-Dimensional vector to visualize words similarities

Principles of Computational Intelligence | *Python* **Spring 2020**

- Genetic: Solve TSP (Travelling salesman problem) with genetic algorithm

Principles of Database Design | *MySQL, NodeJS, ReactJS, JavaScript* **Autumn 2019**

- Restaurant Manager: Simple desktop web application as a restaurant manager implemented with a MySQL database, NodeJS backend, and ReactJS frontend

References

Hosein Zeinali

- Assistant Professor, Computer Engineering Department, Amirkabir University of Technology
- hzeinali@aut.ac.ir

Languages

English | *Limited working proficiency*

Persian | *Native*

Honors and Awards

- Achieved top 0.3% (Rank 425) place among all applicants of the Nationwide University Entrance Exam for B.Sc. in Math. and Engineering (Approximately 137000 applicants), Iran - August 2017.
- Accepted in first stage of Chemistry Olympiad in National Organization for Development of Exceptional Talents, Iran - June 2015.