

Taha Mousavi

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EDUCATION

Bachelor of Science (BSc.), Computer Engineering

Faculty of Computer Science and Engineering, Shahid Beheshti University (SBU)

Sep. 2019 - Present

GPA: 3.83/4

High School Diploma in Mathematics and Physics

National Organization for Development of Exceptional Talents (Sampad)

Sep 2016 - Sep 2019

GPA: 19.6/20

RESEARCH INTERESTS

- Machine Learning
- AI for Health
- Natural Language Processing
- Computer Vision
- Deep Learning
- Software Engineering

HONORS & CERTIFICATES

Ranked 4th at Amirkabir Artificial Intelligence Competitions (AAIC)

Achieved 4th place for intent detection in complex queries in [Hamrah-e-Aval](#) chatbots

Mar. 2023 - Apr. 2023

Ranked 8th out of 110 undergraduate students in Computer Engineering

Faculty of Computer Science and Engineering, SBU

Oct. 2019 - Oct. 2023

TOEFL iBT: 98 / 120

R: 27, L: 25, S: 24, W: 22

Oct. 2023

RESEARCH EXPERIENCES

Research Assistant, Natural Language Processing Lab

Mar. 2023 – Present

Contributed to a project focused on complex query intent detection in chatbots

- Performed data pre-processing tasks, including tokenization, stemming, and data normalization
- Implemented noise removal, TF-IDF, data augmentation, and learning rate scheduling techniques
- Utilized various machine learning and deep learning models, including ParsBERT, RoBERTa, XGBoost, SVM, and Random Forest, achieving an accuracy of 93%

Detecting Offensive and Out-of-Domain Sentences

- Detecting and validating offensive sentences using deep learning models and available data
- Developing custom frameworks for structuring positive and negative sentences within texts for use in various projects
- With the goal of publishing a research paper

B.Sc. Thesis

Jun. 2023 - Present

A Deep Learning-Based Method for Parkinson's Disease Diagnosis from EEG Signals

- Enhanced an existing CNN model with the SincNet architecture, resulting in an accuracy of 99%
- The paper is submitted for publication consideration, currently under review

TEACHING EXPERIENCES

Head TA of Advanced programming | Instructed By [Dr. Vahidi-Asl](#)

Sep. 2021 – Jun. 2022

TA of Advanced programming | Instructed By [Dr. Vahidi-Asl](#)

Feb. 2021 – Jan. 2022

TA of Fundamentals of Computer Programming | Instructed By [Dr. AliAkbari](#)

Sep. 2020 – Jun. 2021

TA of Advanced programming | Instructed By [Dr. AliAkbari](#)

Sep. 2021 – Jan. 2022

TA of Operating Systems | Instructed By [Dr. Ebrahimi Moghadam](#)

Sep. 2022 – Jun. 2023

TA of Software Engineering | Instructed By [Dr. Alidoost Nia](#)

Sep. 2023 – Present

Tasks & Activities as TA

- Leading and managing a group of 5 TAs
- Mentoring students to build a mobile application
- Designer and grader of final project and assignments
- Conducted tutorial sessions

PROJECTS

User Audience Prediction using NLP Approaches | *Python, Pandas, Numpy, scikit-learn, Parsivar* [Github](#) | Jan. 2022

- Developed an end-to-end model for predicting user audience questions using Naive Bayes algorithm and achieved an accuracy of 0.83
- Contributed to the development of the faculty chatbot and intelligent student assistant system, Soha (Intelligent Communication System)

Face Verification System | *Python, Keras, TensorFlow, OpenCV, NumPy, Pandas* [Github](#) | Jan. 2023

- Implemented a face verification system using FaceNet and achieved face feature extraction from images

Anomaly Detection in a Security Camera System | *Python, scikit-learn, NumPy, Pandas, Matplotlib* [Github](#) | Jul. 2023

- Performed data preprocessing, feature extraction, and implemented unsupervised machine learning techniques for anomaly detection
- Utilized techniques like PCA, feature selection based on normal distribution, Gaussian method, DBSCAN, and Isolation Forest

Software Testing using Selenium | *Python, Selenium* [Github](#) | Jul. 2023

- Developed automated testing scenarios using Selenium to validate functionality and report bugs for improved product quality

Shopping Search Engine, Torob | *ReactJS, NodeJS* [Github](#) | Jul. 2022

- Built a shopping website for browsing and purchasing products using ReactJS for frontend and NodeJS for backend

Game & Entertainment Network, Plato | *Java, Android* [Github](#) | Jul. 2020

- Implemented a game and entertainment network using sockets to send and receive data between the server and clients in an Android application

WORK EXPERIENCES

Faranegar Company. IT, Software and Internet Services Feb. 2021 – Present

Developer and Tester

Tehran, Iran

- Designed efficient algorithms for coding, decoding, and compressing barcode, text, and JSON files
- Developed mobile applications and web apps, including online check-in systems for travelers
- Contributed to software test design and execution, ensuring software quality

Mohaymen ICT Jul. 2021 – Sep. 2021

Intern

Tehran, Iran

- Acquired knowledge in inverted index algorithms, code review, and unit testing
- Gained expertise in data binding, multi-threading, networks, services, and SQL in Android programming

TECHNICAL SKILLS

Languages: Python, Java, Dart, C++, SQL

Frameworks: Numpy, Pandas, OpenCV, PyTorch, Tensorflow, Scikit-learn

Developer Tools: Jupyter, VS Code, MongoDBCompass, Selenium, and Android studio

Other Technologies/Frameworks: Linux, Git, GitHub, Gira

RELEVANT COURSES

Machine learning Specialization - Coursera

HOBBIES AND INTERESTS

- Playing Piano
- Playing Soccer
- Workout
- Listening Music

REFERENCES

Armin Salimi-Badr | *Assistant Professor of Computer Science and Engineering, SBU* [Google Scholar](#) | [Email](#)

Mojtaba Vahidi-Asl | *Assistant Professor of Computer Science and Engineering, SBU* [Google Scholar](#) | [Email](#)

Mehran Alidoost Nia | *Researcher at University of Tehran and AAIP Fellow at University of York* [Google Scholar](#) | [Email](#)

Mohsen Ebrahimi Moghaddam | *Professor, Faculty of Computer science and Engineering, SBU* [Google Scholar](#) | [Email](#)

Mehrnoush Shamsfard | *Associate Professor, Faculty of Computer science and Engineering, SBU* [Google Scholar](#) | [Email](#)