

Ali Ranjbari

School of Electrical and Computer Engineering, College of Engineering, University of Tehran, Tehran, Iran

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Education

School of Electrical and Computer Engineering, University of Tehran

Tehran, Iran

B.Sc. IN COMPUTER ENGINEERING (SOFTWARE ENGINEERING MAJOR)

Sep. 2019 - Aug. 2024

- **Cum. GPA: 17.13/20 (3.65/4)**, Faculty Average: 15.1/20 (3.02/4)
- On of the best and most prominent universities of Iran

Shahid Ezheie 2 High School

Tehran, Iran

DIPLOMA IN MATHEMATICS AND PHYSICS

2016 - 2019

- **GPA: 19.29/20**
- As a part of the National Organization for Development of Exceptional Talents (NODET)

Research Interests

- Natural Language Processing
- Artificial Intelligence
- Machine Learning

Publications

Bias mitigation in Persian offensive language detection

In Preparation

AZADEH SHAKERY, YADOLLAH YAGHOUBZADEH, ALI HUMAYOUNI, EMAD KEBRIAEI, ALI RANJBARI

In this paper, we employ a novel approach to mitigate bias in Persian language models, particularly ParsBert. We utilize reweighting techniques to address bias, and modify the loss function accordingly. Additionally, we leverage LMI (Lexical Mutual Information) score for word ranking, and evaluate bias using ROC (Receiver Operating Characteristic) analysis and AUC (Area Under the Curve) metrics.

Experience

University Of Tehran

Tehran, Iran

RESEARCH ASSISTANT

Jun. 2023 - Present

- Under the supervision of Professor **Azadeh Shakery**
- Researching about applying different methods of bias mitigation in Persian offensive language detection

Sharif University of Technology

Tehran, Iran

RESEARCH ASSISTANT

May. 2023 - Present

- Under the supervision of Professor **Hossein Sameti**
- Developing a comprehensive voice-to-voice chat bot system called DANA, which includes an accounting and packaging system for online payments. The system utilizes ChatGPT for AI functionality, along with a TextToSpeech model (ARIANA) and a SpeechToText model (NEVISA). The backend framework employed is Django, and the database of choice is PostgreSQL. Docker is utilized for efficient containerization during the development process.

Vira Afzar Adan

Tehran, Iran

SUMMER INTERNSHIP

Aug. 2022 - Oct. 2022

- Under the supervision of Professor **Heshaam Faili**
- Working on a summer internship project, I focused on utilizing the Transformers library and the ParsBERT model. The objective was to develop an application that calculates the probability of specific words appearing in masked positions within a given sentence. To achieve this, I conducted research on natural language processing (NLP) and BERT models, while also studying PyTorch and the Transformers library. Throughout the project, I prioritized optimizing the application's efficiency and minimizing processing time.

University Of Tehran

Tehran, Iran

TEACHING ASSISTANT

Oct. 2021 - Jan. 2022

- Professor: **Mahmoud Reza Hashemi**
- Course: Introduction to Computing Systems and Programming
- Teaching three distinct classes on basic programming in C. The classes cover programming fundamentals, including logic, data types, control structures, functions, and more. Through interactive lessons, exercises, and projects, students gain a solid understanding of C programming and the ability to develop basic programs.

Honors & Awards

2019	Ranked in Top 1%, National Organization of Educational Testing (NOET)	Tehran, Iran
2016	3rd place in the Technology section, Kharazmi Youth Festival	Isfahan, Iran
2012	Black Belt, Taekwondo	Isfahan, Iran
2010	Silver Medal, Isfahan Province Taekwondo Championship	Isfahan, Iran

Academic Project Highlights

Neural Network Implementation IMPLEMENTATING MODELS OF RESEARCH PAPERS Implementing over 10 research papers with PyTorch across various contexts, including CNNs, RNNs, Transformers, Transfer Learning and ...	Neural Network and Deep Learning Python, Pytorch, Tensorflow
Movie Type Detection AN MOVIE GENRE CLASSIFIER WITH DECISION TREE Classifying movies and TV shows genre using Decision Tree model and random Forrest	Artificial Intelligence Python, Scikit-Learn, TensorFlow
Baloot Online shopping site AN ALL-INCLUSIVE ONLINE SHOPPING PLATFORM A robust website was developed, utilizing Java Spring Boot for the backend and Node.js React for the frontend and MySQL database for the Database. The implementation incorporates various security technologies, alongside Docker and Git, to ensure a secure and reliable platform.	Internet Engineering Java, Spring Boot, React, Docker, MySQL
XV6 Kernel XV6 KERNEL WITH ADDITIONAL FEATURES Improving and adding new features to xv6 kernel like new system calls, synchronization, scheduling and ...	Operating System C and C++
Sudoku Solver SOLVING SUDOKU GAME USING GENERIC ALGORITHM The Sudoku game is tackled using a genetic algorithm, harnessing its capacity to optimize solutions. The algorithm initially initializes the puzzle with random numbers and progressively enhances them by generating offspring and introducing mutations.	Artificial Intelligence Python, Matplotlib

Licenses

Mar. 2023	Machine Learning, DeepLearning.ai	Coursera.org
Oct. 2022	Natural Language Processing with Attention Models, DeepLearning.ai	Coursera.org
Sep. 2022	Natural Language Processing with Sequence Models, DeepLearning.ai	Coursera.org

Skills

Programming Languages	Python, JAVA, C++, C, Node.js
Data Science	Pandas, NumPy, Pytorch, Tensorflow, Scikit-Learn
Front-end	React, HTML5, CSS
Back-end	Django, Fastapi, REST API, Postgre SQL
DevOps	Docker, Docker Compose

Languages

Persian	Native
English	Fluent (TOEFL score 93)

Selected Course Scores

- Artificial Intelligence, 19/20(4/4)
- Neural Networks and Deep Learning, 17.9/20(4/4)
- Advance Programming, 17.79/20(4/4)
- Algorithm Design, 17/20 (4/4)
- Data Structures, 19.2/20(4/4)
- Internet Engineering, 18.7/20 (4/4)
- Database Design, 17.9/20(4/4)
- Engineering Probability and Statistics, 14.5/20 (3/4)