# Setareh Babajani

## Education

**IUST University ([among the top 4 universities in Iran](#))**  
Tehran, Iran  
B.Sc. in Computer Science at Iran University of Science & Technology  
2020 - Feb 2025

- GPA of the Last Two Years: **4.0/4.0** (**18.5/20.0** on the Iranian Scale)
- Overall GPA: **3.98/4.0** (**18.3/20.0** on the Iranian Scale)
- Ranked among top **5%** GPA in my class
- Selected Courses (on the Iranian Scale): Natural Language Processing: 18.32/20, Artificial Intelligence: 17.54/20, Deep Learning: 20/20, Computer Vision: 17.88/20, Signals and Systems: 19.5/20, Computer Networks: 17.1/20

**Farzanegan High School**  
Mazandaran, Iran  
Diploma in Mathematics and Physics  
2016 - 2020

- Grade: **19.90/20.0**

## Research Interests

- **NLP**   - **Deep Learning**   - **Machine Learning**   - **Computer Vision**   - **Generative Models**
- **Recommender Systems**   - **Graph Neural Networks**

## Research Experience

**Natural Language Processing Research Assistant in NLP Laboratory**  
IUST  
Bachelor Thesis, School of Computer Engineering  
April 2024 - Present

- Supervisor: Dr. Sauleh Eetemadi
- Using RAG models for medical diagnosis.
- Exploring different models like GPT, Llama, and Med-Flamingo.
- Exploring different evaluation metrics like ragas metrics or llm as a judge method.

**Natural Language Processing Intern**  
IUST  
Summer Internship  
Jun 2023 - Sep 2023

- Supervisor: Dr. Sauleh Eetemadi
- Worked on the "Visual Dialog in the medical Field" project and reviewed related articles. [GitHub](#)
- Implemented various Encoder-Decoder models and Attention Mechanisms using Keras & tensorflow.

## Skills

- **Programming Languages:** Python, Java, C, C++, C#, JS, SQL, HTML , CSS
- **Libraries and Frameworks:** Pytorch, Keras, TensorFlow, Scikit-Learn, Numpy, React JS
- **Environments and Tools:** Git, Postman, Azure Devops, Linux (Ubuntu)

## Teaching & Academic Experience

**Teaching Assistant**  
IUST  
School of Computer Engineering  
Oct 2022 - Jan 2025

- **Artificial Intelligence** - Instructor: Dr. Mohammad-Reza Mohammadi - Fall 2024
- **Systems Analysis and Design** - Instructor: Dr. Mehrdad Ashtiani; - Fall 2024
- **Compilers** - Instructor: Dr. Saeed Parsa - Fall 2023
- **Fundamentals of Programming** - Instructors: Dr. Sauleh Eetemadi; Dr. Mehrdad Ashtiani; Dr. Marzieh Davoodabadi Farahani - Spring 2022, Spring 2023, Fall 2024
- **Advanced Programming** - Instructor: Dr. Sauleh Eetemadi - Fall 2022
- **Algorithms Design** - Instructor: Dr. Farzaneh Ghayour Baghbani - Fall 2024

## Academic Projects

**NoWaste**                                                                         IUST
System Analysis and Design Course Project                                    Winter 2022

- – It's an application for preventing the wastage of unsold food in restaurants and cafes.
- – The application was developed with Scrum Methodology and I contributed to the front-end of it.
- – Frontend is implemented with React JS. GitHub
- – Backend is implemented with Django. GitHub

**Anti-Spoofing algorithm for checking the liveliness of faces in videoes**          IUST
Computer Vision Course Project - GitHub                                      Spring 2024

- – The project was for checking whether a face in the video is alive or not.
- – In this project, two different models, including a feature-based and a deep learning model, were used.
- – For the feature-based model, SVC was used.
- – For the deep moodel, VGG16 and some extra un-pretrained layers were used.
- – The data came from CASIA-FASD.

**Sentiment Analysis in Persian texts**                                              IUST
Deep Learning Course Project - GitHub                                        Winter 2024

- – In this project, DistilBert model was used.
- – In this project, different pre-processing methods like normalization, stemming, spell checking, and vectorization were used.
- – The data came from ArmanEmo dataset.

**RAGs**                                                                             IUST
NLP Course Project                                                          Spring 2024

- – The first RAG project is for Chatbot for a website's FAQ which compares the result of three different generative models. GitHub
- – The second RAG project is for organizational reports which use gpt2 in generation time. GitHub

**Theory of Languages and Automata Proejcts**                                        IUST
TLA Course                                                                   Winter 2021

- – Implementing turing-machine. GitHub
- – Implementing PDA-calculator. GitHub
- – Implementing string-belongs-to-finite-automata. GitHub

## Honors & Certificates

**Among the top 5% in my class in GPA (last two years:18.5/20, 18.3/20 overall)**   Sep 2020 - Present
School of Computer Engineering, IUST

- – Class of about 100 students

**Ranked Within the Top 0.7% in Iranian University Entrance Exam**                July 2020
Mathematics and Physics majors

**Deep Learning Specialization**                                                 Sep 2023
Certificate on Coursera.org

- – Includes courses on Neural Networks and Deep Learning, Machine Learning, Convolutional Neural Networks, Sequence Models

**Natural Language Processing with Classification and Vector Spaces**
Certificate on Coursera.com                                                       Sep 2023

- – Covers many topics in NLP and Data Preprocessing using Python.

**Convolutional Neural Networks**
Certificate on Coursera.com                                                       Aug 2023

- – Covers many topics about CNNs, object detection and face recognition.

**Algorithms on Graphs**                                                         Mar 2022
Certificate on Coursera.org

- Includes courses on graphs, MST and ASP.

**Data Structures** Dec 2021

Certificate on [Coursera.org](Coursera.org)

- Includes courses on different data structures, hash tables and BST.

**Algorithmic Toolbox** Nov 2021

Certificate on [Coursera.org](Coursera.org)

- Includes courses on greedy algorithms, divide-and-conquer algorithms and dynamic programming.

## Languages

- **Persian:** Native speaker
- **English:**
  - IELTS: **Overall: 7**, Reading: **8**, Listening: **7.5**, Speaking: **6.5**, Writing: **6.5**

## Membership

**Volunteer Member of Computer Engineering Scientific Association** IUST

School of Computer Engineering Jan 2023 - May 2024

- **CESA LEARN:** Assisting in the organization of academic courses

## References

**Dr. Sauleh Eetemadi** Iran University of Science & Technology - University of Birmingham

Assistant Professor at Department of Computer Engineering

- Email: s.eetemadi@bham.ac.uk

**Dr. Behrooz Minaei-Bidgoli** Iran University of Science & Technology

Professor at Department of Computer Engineering

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**Dr. Mehrdad Ashtiani** Iran University of Science & Technology

Assistant Professor at Department of Computer Engineering

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**Dr. Marzieh Davoodabadi Farahani** Iran University of Science & Technology

Assistant Professor at Department of Computer Engineering

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