Erfan Nasiri | Curriculum Vitae

University of Tehran - Department of Electrical and Computer Engineering
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EDUCATION

- **Bachelor of Science** September, 2019-Present
  University of Tehran *Tehran-Iran*
  - Electrical and Computer Engineering
    - Major: Software Engineering
    - GPA: 3.2/4 (140 credits)
      - Last two years: 3.65
      - Last year: 3.68

RESEARCH INTERESTS

- Machine Learning
- Computer Vision
- NLP
- AI in Medical Diagnosis

HONORS & AWARDS

- Top 5% in Iran's nationwide university entrance exam, among more than 155,000 participants. [Summer 2020]
- Awarded a fully funded 4-year Bachelor of Science degree in Computer Engineering. [Fall 2020]

SELECTED COURSES

- Artificial Intelligence [Fall 2022]
  - Instructor: Dr. Hedieh Sajedi
  - Grade: A+
- Operating Systems [Fall 2022]
  - Instructor: Dr. Maliheh Ghomsheh
  - Grade: A+
- Database Design [Spring 2023]
  - Instructor: Dr. Ali NaghashAsadi
  - Grade: A+
- Systems Analysis and Design [Spring 2023]
  - Instructor: Dr. Ali NaghashAsadi
  - Grade: A

SKILLS

Programming Languages

- Python
- JavaScript
- C/C++
- Rust
- Verilog HDL
- MySQL
- LaTeX

Frameworks

- TensorFlow
- Keras
- NLTK
- SKlearn
- SpaCy
- Streamlit
- Transformers

Softwares/Platforms/Tools

- Docker + Kubernetes
- Proteus
- Arduino
- MS Visio
- MS Excel
- MS Word
- MS Visual Studio
- Git
- GitHub
- Linux

TEACHING EXPRIENCE

- Teaching Assistant
  - Physics II — Winter 2023
    - Instructor: Dr. Zahra Nasrollahi (Tehran University)
    - Actively participated in curriculum planning and lesson delivery, working closely with faculty members.
    - 80+ students
  - Differential equations (ODE) — Winter 2023
    - Instructor: Dr. Fatemeh Esmaeili Khalil Saraei (Tehran University)
    - Provided one-on-one tutoring and academic support to students, resulting in increased engagement and grades.
    - 30+ students
  - Engineering Mathematics (Advanced) — Fall 2023
    - Instructor: Dr. Fatemeh Esmaeili Khalil Saraei (Tehran University)
    - Collaborated with a fellow TA to Design assignments, and instruct course material.
    - 40+ students

PROJECTS

- Predicting Water Pollutant Removal Efficiency with Machine Learning Techniques
  - Developed and evaluated machine learning models to predict the percentage of pollutant removal achievable by a given water treatment technology.
  - Analyzed a comprehensive dataset of water pollutant remover characteristics and removal performances, extracting key features and engineering additional informative variables.
  - Visualized model performance and insights through various plots and charts, aiding in interpreting model behavior and identifying influential factors for pollutant removal.
  - This project was part of a chemical engineering student's maters thesis.
  - Supervisors: Dr. Azadeh Ebrahimian Pirbazar, Dr. Fatemeh Esmaeili K. S. (Tehran University)
- Planning, Analysis, and Design of an Online Auction System
  - Creating a high-quality software requirement specification document for the system.
  - Creating ER diagram for the system database.
  - Specifying, visualizing, and documenting the system using UML diagrams.
  - Supervisor: Dr. Ali NaghashAsadi (Tehran University)
- Project Title: Solving Maze Problem Using Reinforcement Learning
  - Problem environment included flags and walls.
  - The agent had to cross all flags and find the shortest path without hitting a wall.
  - Applying reinforcement learning techniques for the required tasks.
  - Supervisor: Dr. Hedieh Sajedi (Tehran University)
- Handwritten Digit Recognition using Neural Networks
  - The MNIST dataset has been utilized
  - No use of Keras and TensorFlow
  - Above 85 percent accuracy
- Old Black and White Image Colorization Using Convolutional Neural Networks
  - Converting images from RGB format to LAB.
  - Extracting L channels and AB channels of images and training the network.
  - This dataset has been utilized. (taken from the MIRFLICKR25k dataset)

Certificates

- Natural Language Processing Specialization
- Applied AI with DeepLearning
- MLOps Tools: MLflow and Hugging Face
- Machine Learning Engineering for Production (MLOps) Specialization
- Deep Learning for Healthcare Specialization

References, Further information, and Proofs are available upon Request