

Alireza GhaffarTehrani | Curriculum Vitae

Tehran Polytechnic (Amirkabir University of Technology)

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RESEARCH INTERESTS

- Data Science
- Machine Learning
- AI and Data Security
- Bioinformatics
- Natural Language Processing
- Computer Vision

EDUCATION

- **Bachelor of Science** 2017–Present
🎓 *Tehran Polytechnic (Amirkabir University of Technology)* *Tehran, IRAN*
 - Computer Engineering
 - Major: Artificial Intelligence and Computer Network
 - GPA: 17.49/20 (3.74/4)

HONORS

- **Ranked in the top 5% among 200 students** in Computer Engineering, AI field, 2021, Tehran Polytechnic
- **Honored as an outstanding Mathematics instructor**, 2020, Tehran Department of Education and Training Center, Tehran
- **Entrance exam exempted for a Master degree program in Computer Engineering** as honors student, 2020, Tehran Polytechnic
- **Ranked as the top 3% among around 138,000 participant** in the nationwide university entrance exam, Summer 2017

WORK EXPERIENCE

- 🏢 *Tehran Department of Education and Training Center* 2010–Present
High School Instructor in: *Tehran, IRAN*
 - Mathematics
 - Physics
 - Chemistry













LANGUAGE SKILLS

- Persian Native
- English Fluent
 - IELTS Test (December 6th, 2021) Overall: 7
 - Listening: 7
 - Reading: 6.5
 - Speaking: 7
 - Writing: 6.5
 - Duolingo Test (November 26, 2021) Overall: 125
 - Literacy: 120
 - Comprehension: 130
 - Conversation: 125
 - Production: 105

PROJECTS

- Adversarial Robustness of Online Image Streaming
 - Defence against adversarial attacks on DNNs
 - Optimization
- Pre-processing and Data Classification
 - Implementing Decision Tree, KNN, Bayesian, Linear/Nonlinear SVM, Random Forest, and Adaboost classifier algorithms
- K-means Algorithm Implementation for Clustering N-Dimensional Data
 - Implementing PCA algorithm to avoid the curse of dimension (without using the Python library of Sklearn)
- Chat-bot Implementation for Airline's Online Booking using NLP Methods in Persian Language
- Hand Written Digit Recognition using MNIST database
 - Implementing a fully-connected neural network with two hidden layers (with/without using the Python library of Numpy)
- Fuzzy Clustering with FCM Method
 - Clustering multi-dimensional datasets using fuzzy C-means clustering
- Evolutionary Game Implementation
 - Programming an agent for a simple 2D minigame to maneuver by the help of neural networks' evolution
- Online Store Implementation
 - Frontend and backend development using HTML, CSS, and JS
- Non-linear Regression
 - Regression of any given n-dimensional dataset with the LS method

Courses

- | | |
|--|--------------------|
| ○  Computational Intelligence | Grade: 18/20 (4/4) |
| ○  Applied Linear Algebra | Grade: 20/20 (4/4) |
| ○  Discrete Mathematics | Grade: 18/20 (4/4) |
| ○  Engineering Statistics | Grade: 18/20 (4/4) |
| ○  Web Programming | Grade: 16/20 (4/4) |
| ○  Theory of Machines and Languages | Grade: 17.94 (4/4) |
| ○  Signals and Systems | Grade: 17/20 (4/4) |
| ○  Electrical and Electronic Circuits | Grade: 17.86 (4/4) |
| ○  Logic Circuits and Lab | Grade: 17/20 (4/4) |
| ○  Technical English | Grade: 17/20 (4/4) |
| ○  Physics | Grade: 20/20 (4/4) |
| ○  Mathematics | Grade: 17/20 (4/4) |

COMPUTER SKILLS





Programming/Scripting

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|----------------|-----------------------------------|
| ○ Python | ○ MySQL |
| - TensorFlow | ○ PostgreSQL |
| - PyTorch | ○ MongoDB |
| - NumPy | ○ C |
| - Mathplotlib | ○ JavaScript |
| - Pandas | ○ HTML5/CSS3 |
| - Scikit-Learn | ○ L ^A T _E X |

IDEs/Tools

- | | |
|------------|----------|
| ○ VSCode | ○ MATLAB |
| ○ PyCharm | ○ Maple |
| ○ IntelliJ | |

TEACHING ASSISTANT

-  Algorithm Design Fall 2021
 - Supervisor: Dr.Alireza Bagheri
-  Microprocessor and Assembly Language Fall 2021
 - Supervisor: Dr.Hamed Farbeh
-  Logic Circuits Winter 2020
 - Supervisor: Dr.Morteza Saheb Zamani
-  Logic Circuits Fall 2019
 - Supervisor: Dr. Mehdi Sedighi

REFERENCES

- Ehsan Nazerfard, Assistant Professor
 - Member of Artificial Intelligence and Robotics Group, CE, AUT
 - Email: nazerfard@aut.ac.ir
 - Phone: 0098 21 64542707
- Mehdi Rasti, Associate Professor
 - Member of Computer Networks and Architecture Group, CE, AUT
 - Email: rasti@aut.ac.ir
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- Morteza Saheb Zamani, Professor
 - Member of Computer Networks and Architecture Group, CE, AUT
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- Alireza Bagheri, Associate Professor
 - Member of Software Group, CE, AUT
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Feb. 14th, 2022

Alireza Ghaffartehrani