Soroush Mehraban

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RESEARCH INTEREST

- **Image Segmentation**
- **Generative Models**
- **Computer Vision**
- **Deep Learning**
- **Machine Learning**

EDUCATION

- **Amirkabir University of Technology** (Tehran Polytechnic), Tehran, Iran

  - **B.Sc.**, Computer Engineering — *Sep. 2017 - now (expected graduation date: July, 2022)*
    GPA: **19.08** / 20 (**4.00**/4.00)

- **Farabi High School**, Tehran, Iran

  - **Diploma**, Mathematics & Physics Field — *Sep. 2013 - June. 2016*
    GPA: **19.72** / 20

PUBLICATION

- Mahmoodi, A., Mehraban, S., Hashemi, L., Jasemi, M., (2021). *A novel approach for candlestick technical analysis using a combination of the support vector machine and particle swarm optimization.* Manuscript submitted for publication.

SKILLS

Programming Languages: Python (Advanced), Java (Intermediate), C (Intermediate).
Libraries: PyTorch (Beginner), scikit-learn (Beginner), NumPy (Intermediate), pandas (Intermediate), Matplotlib (Intermediate).
Database Systems: MySQL (Intermediate). PostgreSQL (Intermediate)
Operating Systems: Windows, Linux (Ubuntu).
Web Development: HTML, CSS, JavaScript, Bootstrap, JQuery, Django, Angular, ORM.
Code Versioning Tools: Git.

SELECTED PROJECTS

- **DCGANs**
  Implemented DCGANs paper using CelebA dataset with documentation.
  Code with documentation on github

- **Handwritten Digit Recognition**
  Implemented a fully-connected neural network with two hidden layers (without using any library) to detect handwritten digit images.
  Code with documentation on github

- **Poet detection using NLP**
  Detected poet of a poem with an average accuracy of 83% using bigram and unigram language models and back-off model as a smoothing technique.
  Code with documentation on github

- **Evolutionary Games**
Implemented an agent for a simple 2D minigame to maneuver via neural network + evolution.
Code on github

- **Fuzzy C-Means Clustering**
Clustered multi-dimensional datasets using fuzzy C-means clustering
Code on github

TEACHING ASSISTANT EXPERIENCE	

- **Principles of Computational Intelligence (CE, AUT)**   *Fall 2021*
Instructor: Prof. Mohammad Mehdi Ebadzadeh

- **Applied Linear Algebra (CE, AUT)**   *Fall 2020*
Instructor: Dr. Ehsan Nazerfard

  - Making supplementary videos tutorials for students.
  - Grading home-works
  - Grading & defining projects.

- **Operating Systems (CE, AUT)**   *Fall 2020*
Instructor: Dr. S.Ahmad Javadi

  - Making supplementary videos tutorials for students.
  - Grading home-works

WORK EXPERIENCE

Tecvico   *December 2020 - September 2021*
Vancouver, Canada
IT Director and Web developer.

Route Homes   *December 2020 - December 2020*
Toronto, Canada
Web developer.

HONORS

- Eligible to **Choose Second Major** due to outstanding performance, Amirkabir University of Technology, Tehran.

- **Ranked as Top 3%** among more than 150,000 participants in National Entrance Exam for Undergraduate State Universities, Tehran, 2017.

LANGUAGES

- **Persian** (Farsi): Native
- **English**: IELTS 7.5 (Listening: 8.5, Reading: 7.5, Speaking: 7, Writing: 6.5)

REFERENCES

- **Ehsan Nazerfard, Associate Professor**
Member of Artificial Intelligence Group, CE, AUT
Email: nazerfard@aut.ac.ir
Homepage: aut.ac.ir/cv/2384/Ehsan-Nazerfard

- **S.Ahmad Javadi, Assistant Professor**
Member of Computer Networks and Architecture Group, CE, AUT
Email: sajavadi@aut.ac.ir
Homepage: aut.ac.ir/cv/21291/S.Ahmad-Javadi

- **Mohammad Mehdi Ebadzadeh, Professor**
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