Niloufar Faridani | CV

Tehran - Iran

+989021801898 • ✉ Nilu.1380@gmail.com

Education

University of Tehran
College of Engineering,   *2019–Now*
B.Sc in Electrical Engineering
Top 1% Iran University Entrance Exam (Konkour)
GPA : 16.90/20 | 3.55/4

Salam High schools
Mathematic and physics,   *2016–2019*
Percentage: 100%

Experience

University of Tehran - Secure Communication Laboratory   **Research Assistant**
Supervisor: Prof. Mohammad-Ali Akhaee, Dr. Ramin Toosi"   *Sep 2022–Present*
Deep learning models for predicting eye gaze points

University of Tehran - Convergent Technologies Research Center   **Research Assistant**
Supervisor: Prof. Mohammad-Reza A. Dehaqani, Dr. Ramin Toosi"   *Sep 2021–Present*
Deep learning models for Emotion detection

University of Tehran - Computational Audio-Vision Laboratory   **Intern**
Supervisor: Prof. Reshaad Hosseini   *July–Sep 2021*
Deep learning model for Optical character recognition (OCR)

University of Tehran - Convergent Technologies Research Center   **Research Assistant**
Supervisor: Prof. Mohammad-Reza A. Dehaqani   *May 2021*
Twister Development,

University of Tehran - Convergent Technologies Research Center   **Research Assistant**
Supervisor: Prof. Mohammad-Reza A. Dehaqani   *Oct 2021*
Heat-Bed Development

University of Tehran   **Teaching Assistant**
Introduction to Computing Systems and Programming, "Prof. Hadi Moradi"
Electric Circuit 1, "Prof. Moein Abedini"
Signals and Systems, "Prof. MohammadAli Akhaee"
Electric Machinery 1, "Prof. Moein Abedini"
ElectroMagnetics, "Prof. Mohammad Neshat"   *2021–Present*

Awards

2017: Winner of Java programming competition named "Salam Cup".

Skills

Programming..

Python, C, R, Verilog, System Verilog, Java

Others...

MATLAB, Arduino, Modelsim, Data Mining, Adobe Audition, Photoshop

Projects

Eye gaze prediction

Python, Deep learning, Signal Processing *Sep 2023-Present*

The project is about building a Deep learning model for predicting the gaze points of the viewer which shows which areas in the video are more interesting

Emotion detection

Python, Deep learning, Signal Processing *2022-Present*

The project is about building a Deep learning model for recognizing feeling of the speaker.

Speech signal processing

MATLAB, Signal Processing *2022*

The project was about time-frequency analysis of audio signals. It contains Fourier Transform, Short-time Fourier transform, and Spectogram.

Implementing AC-GAN

Python, Deep Learning, Pytorch *2022*

This project is about implementing a Auxiliary conditional generative adversarial network, trained on costum dataset.

Implementing Deep Convolutional GAN

Python, Deep Learning, Pytorch *2022*

This project is about implementing a unsupervised learning based on convolutional neural networks and generative adversarial networks

AlexNet image classification

Python, Deep Learning, Pytorch *2022*

This project is about employing AlexNet for multiple classification on costum flower images.

Semantic segmentation

Python, Deep Learning, Pytorch *2022*

Semantic segmentation of "Scene-parse-150" dataset using BERT Pre-training of Image Classification.

Image Classification

Python, Deep Learning, Tensorflow *2022*

This project is about image classifcation using MLP + BEiT with CIFAR10 dataset.

Fake News Detection

Python, Deep Learning, Tensorflow *2022*

This project is about detecting fake news using hybrid CNN+LSTM network.

Air-pollution prediction in smart city

Python, Deep Learning, Tensorflow *2021*

For predicting the value of PM2.5 in the next 24 hours and also next week, dataset of air-polluting materials and a CNN+LSTM deep network is been used.

Naive-bayes algorithm

Python, Machine Learning *2022*

The objective of this task is to use a simple Naive Bayes algorithm to determine the accuracy percentage of digit recognition from a dataset where numbers 0 to 9 are manually written.

Twister Development

Arduino, Signal Processing, Electronics *2021*

The project was about to build a device that can twist couple of tiny wires by desired rotation speed and turning numbers and direction. The device is now being used in taking EEG signals from rats.

Heat-Bed Development

Arduino, Controlling Systems, Electronics *2021*

The project was about to design a sensor that sense and control the temperature of rat body during surgery.

Synthesis and Analysis DTMF Code

MATLAB, Signal Processing *2021*

Touch tone is the tone you hear while pushing phone keys. I learned how to produce them and also decode them to numbers.

Huffman Coding and Decoding

MATLAB, Signal Processing *2022*

This method of coding is being used in transmitting and receiving symbols of a signal.

MIPS Processor Design

Digital Systems, Verilog *2021*

A processor that calculates multiple mathematical operation one after another at high speed.

Termistor Sensing Temperature

Electrical Systems, Arduino *2021*

It senses the temperature of everything you want and by a heating plate, it can raise it up, or also cool it down.

Coursework

Wireless communication
Convex optimization
Neural Networks and deep learning
Intelligent systems
Digital signal processing
Signal and systems
Communication Systems
Digital communication
Engineering Probability and Statistics
Introduction to Computing Systems and Programming
Computer networks

Certificates

Computational Neuroscience

Neuromatch Academy - July 2023

Skills acquired: Neuroscience, Deep Learning, Optimization, Modeling

Improving Deep Neural Networks: Hyperparameter Tuning, Regularization and Optimization

DeepLearning.AI - **Coursera** - Aug 2022

Skills acquired: Deep Learning, Optimization

Neural Networks and Deep Learning

DeepLearning.AI - **Coursera** - Aug 2022
Skills acquired: Deep Learning

Python Data Structures

University of Michigan - **Coursera** - Aug 2022
Skills acquired: Python, Data structures

Structuring Machine Learning Projects

DeepLearning.AI - **Coursera** - Jul 2022
Skills acquired: Machine Learning

Languages

Persian: Native proficiency

English: Professional working proficiency