# Farbod Siahkali

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## SKILLS

#### **PROGRAMMING**

Python and Jupyter-Notebook Matlab, C, C++, Verilog

#### MACHINE LEARNING TOOLS

Scikit-learn, Pytorch TensorFlow, Keras, Pandas Numpy, Matplotlib, OpenCV Regression K-Nearest Neighbors

## **SOFTWARE TOOLS**

ETEX
Tensorboard
Git and Github
MS Office

## **FDUCATION**

## BACHELOR OF ELECTRICAL ENGINEERING

University of Tehran - GPA 3.79/4.0

Sep 2019 - Present | Tehran, Iran Specialized in control engineering.

#### **DIPLOMA OF MATHEMATICS**

SALAM HIGH SCHOOL - GPA 3.89/4

June 2016 - Sep 2019 | Tehran, Iran

#### **ENGLISH COURSE**

IRAN LANGUAGE INSTITUTE
June 2011 - Sep 2017 | Tehran, Iran
Graduated with Overall score
84.2/100.

## VOLUNTEER

 Member of ECE Educational Committee at University of Tehran in order to improve the learning experience of current and future students.

## **EXPERIENCE**

## NEURAL NETWORKS AND DEEP LEARNING | RESEARCHER IN

TAARLAB: HUMAN AND ROBOT INTERACTION LABORATORY

May 2021 - Present | Tehran, Iran

- Implementing deep convolutional neural networks for person-Reid, attribute recognition, and attribute retrieval tasks.
- Implementing human detection and tracking models.

## **TEACHING ASSISTANT** | TEACHING ASSISTANT AT UNIVERSITY OF TEHRAN

Sep 2020 - Present

- Engineering Mathematics | Fall 2021 | Dr. M.Tale Masouleh.
- Electronics | Fall 2021 | Dr. Sanaei.
- Engineering Mathematics | Spring 2021 | Dr. Taheri.
- Introduction to computing systems and programming | Fall 2020 and Fall 2021 | Dr. Moradi.
- Introduction to Electrical engineering | Spring 2021 | Dr. Samimi.

## **PROJECTS**

#### IRANIAN VEHICLE TRACKING AND RECOGNITION | Aug 2022

• Proposed SIVD: Scraped Iranian vehicle dataset. Implemented a tracking and recognition using Yolov5 and OSnet.

#### **DUKEMTMC DATASET ANNOTATION** | DEC 2021

 Proposed Categorical Attribute DukeMTMC(CA-Duke) which is an extension of DukeMTMC-reID dataset with 76 attributes for over 32,000 train and test images.

#### ATTRIBUTE RECOGNITION/RETRIEVAL | DEC 2021

 Developed a multi-branched model for the task of attribute recognition on the CA-Duke dataset without affecting the weights of the Re-ID baseline.

## PERSON RE-ID | DEC 2021

• Improving the results of the pre-trained person re-identification network (Omni-scale) using multiple re-ranking methods on the network's Re-ID and attribute recognition features.

## FASHION RECOMMENDATION SYSTEM | FEB 2022 - PRESENT

• Web scraping online fashion stores and developing a recommendation system using ranking methods.

## INPUT IMAGE OPTIMIZATION | DEC 2021

• Optimizing a convolutional neural network's input based on an specific target in order to visualize the network's concept of the target.