AMIN MALEKMOHAMMADI

CONTACT

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@Swiman
Amin

SKILLS

Programming

Python
C++
Matlab
C#
Node.js

Tools & Libraries

Computer Vision
(OpenCV, Scikit-Image, ITK)

Deep Learning
(PyTorch, TensorFlow, Keras)

Data handling
(NumPy, SciPy, pandas)

Languages

Persian • Native
Turkish • Native
English • IELTS to be taken

EDUCATION

IUST - Iran University of Science and Technology *Tehran, IR*
M.Sc. In Computer Engineering Major : Artificial Intelligence *09/2019 - 08/2022*

- Supervised by Dr. Mohsen Soryani
- Thesis: Mass detection and segmentation in Automated Breast Ultrasound (ABUS) images
- CGPA : 3.53/4

Tabriz University *Tabriz, IR*
B.Sc. In Computer Engineering Major : Information Technology *09/2014 - 08/2018*

- Supervised by Dr. Seyed Naser Razavi
- Thesis: Music Genre Recognition with CNNs
- CGPA : 3.2/4

RESEARCH INTERESTS

- Computer Vision
- Medical Image Analysis
- Interpretability of Deep Models

PUBLICATIONS

Cancer Detection in Automated 3-D Breast Ultrasound Using a Patch Bi-Convlstm Network

A. Malekmohammadi, S. Barekatrezaei, E. Kozegar and M. Soryani

2022 Ultrasonics pdf

Mass Detection in Automated 3-D Breast Ultrasound Using an improved Inception 3D U-net

S. Barekatrezaei, **A. Malekmohammadi**, E. Kozegar and M. Soryani

2022 JMVIP pdf

RESEARCH EXPERIENCE

Graduate Research Assistant **CV Lab, IUST** *08/2022 - present*

- Working on ABUS mass classification
- Supervised by Dr. Mohsen Soryani

SELECTED PROJECTS

Video Augmented Reality
Keypoints of each video frame extracted with Harris corner detector and tracking performed with Lucas-Kanade algorithm

Sentiment Analysis
A study on performance of different word embedding techniques (e.g. BOW, Word2Vec and BERT) with several classi fiers (e.g. Support Vector Machines, Naive Bayes, Decision Tree and Random Forests

Implementation of Boosting Algorithms for Dealing with Data Imbalance
AdaBoost.M2, SmoteBoost, RUSBoost and RBBoost.

Implementaion of Various Deep Models
YoloV5-face (realtime face detection), Super Resolution GAN (SRGAN), Gated Convolution for image in-painting and Residual Dense Blocks for image Restoration.