Saeed Shakuri

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Google Scholar
ResearchGate
HomePage
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Overview

My research interests broadly lie in **Deep Learning**, with some emphasis on **Multimodal Learning** and **Computer Vision**, including but not limited to the medical and healthcare domains. I'm also greatly passionate about expanding my skills to **Explainable/Interpretable AI**. My current research focuses on Computer Vision methods (Object detection) in detecting lung nodules for lung cancer in CT scan images. Moreover, I have authored a paper in this field and collaborated on two other papers in the context of real-time facial emotion recognition (Image classification).

Research interests: Deep Learning, Multimodal Learning, Computer Vision, Medical Applications in Deep Learning

Education

University of Science and Culture, Tehran, Iran — Oct. 2021 - Expected Feb. 2025
M.S., Data Science — Advisor: Dr. Alireza Rezvanian
Thesis: Few-shot object detection.
GPA: 4 out of 4 (19.05 out of 20)

Technical and Vocational University, Tehran, Iran — 2018 - 2021
B.E., Electronics engineering (Shamsipour College) — Advisor: Dr. Mahdiyar Nouri Rezaie
Project: A smart house remote control using Arduino.

Technical and Vocational University, Karaj, Iran — 2016 - 2018
AS, Electronics engineering (Beheshti College)

Publications

(Accepted) Saeed Shakuri and Alireza Rezvanian. "An Efficient Approach in Detecting Lung Nodules Using Swin Transformer." 19th Iranian Conference on Intelligent Systems (ICIS), IEEE, 2024.

(Published) Omid Ghadami, Alireza Rezvanian, and **Saeed Shakuri**. "Scalable Real-time Emotion Recognition using EfficientNetV2 and Resolution Scaling." 10th International Conference on Web Research (ICWR), IEEE, 2024.

(Under Review) Omid Ghadami, Alireza Rezvanian, **Saeed Shakuri**, and Mohammad Shamami. "Real-time facial emotion recognition in smartphones using EfficientNetV2 and quantization-aware training." Multimedia Tools and Application, Springer.

(In preparation) Saeed Shakuri and Alireza Rezvanian, "Lung Nodule Detection Using Few-shot Learning and Swin Transformer." to be submitted to Computerized Medical Imaging and Graphics.

Teaching Assistant

Information Retrieval on the Web (Graduate class) — Fall 2024
University of Science and Culture

Artificial Intelligence (Undergraduate class) — Fall 2023
University of Science and Culture

Machine Learning (Graduate class) — Fall 2022
University of Science and Culture

Notable Academic Projects

Traffic Sign Detection Using Faster R-CNN, FPN, and Transfer Learning.
Link: https://github.com/SaeedShakuri/Computer-Vision/blob/main/PyTorch_Object_Detection_Transfer_Learning_Traffic_Sign.ipynb

Object detection with Detectron2.
Link: https://github.com/SaeedShakuri/Detectron2

Measuring sentence similarity with a TF-IDF approach.
Link: https://github.com/SaeedShakuri/ML-DL-Projects/tree/main/NLP

Image classification using Transfer Learning, regularization terms, and SGD optimizer with PyTorch.
Link: https://github.com/SaeedShakuri/Computer-Vision/blob/main/Pytorch_Transfer_Learning.ipynb

A classification project using Ensemble Learning with the Abalone dataset.
Link: https://github.com/SaeedShakuri/ML-DL-Projects/tree/main/Ensemble%20Learning

Professional Services

Reviewer
Elsevier - International Journal of Electrical and Computer Engineering — Oct. 2024
Wiley - The Journal of Engineering — Aug. 2023
Elsevier - Data in Brief Journal — Mar. 2023 - Apr. 2023

Judge — Jul. 2023 & Jan. 2024
University of Science and Culture
- Judging the final projects of computer science undergraduate students.

Invited Presenter — Dec. 2022
University of Science and Culture
- Presentation title: An Introduction to Few-Shot Learning

Work Experience

BlazingFallApps, remotely — Mar. 2020 - Nov. 2021
Software Developer
- Developing various mobile applications using the Flutter framework and Dart programming language

Skills

Programming Languages
Python, Dart, C

Softwares and Tools
Google Colaboratory, EndNote, LaTex, MiniTab, VSCode

Technological Proficiencies
PyTorch, Detectron2, OpenCV, NumPy, Matplotlib, Flutter

IELTS Academic (Taken in Sep. 2023)
Overall: 7, Speaking: 7.5, Listening: 7, Writing: 6.5, Reading: 7

Master's Courses

All of the courses received a grade of 4 out of 4:

- Natural Language Processing — Spring 2023
- Computer Vision — Fall 2022
- Computational Social Network — Fall 2022
- Artificial Neural Networks — Spring 2022
- Machine Learning — Spring 2022
- Seminar — Spring 2022
- Data Science Mathematics — Fall 2021
- Advanced Algorithms — Fall 2021
- Applied Data Analysis — Fall 2021

References

References are available upon request.