





Saeed Shakuri

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Last updated: Jan. 2025

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 M.S., Data Science Thesis: Few-shot object detection. GPA: 4 out of 4 (19.05 out of 20)	Oct. 2021 - Expected Mar. 2025 Advisor: Dr. Alireza Rezvanian
Technical and Vocational University, Tehran, Iran B.E., Electronics engineering (Shamsipour College) Project: A smart house remote control using Arduino.	2018 - 2021 Advisor: Dr. Mahdiyar Nouri Rezaie
Technical and Vocational University, Karaj, Iran AS, Electronics engineering (Beheshti College)	2016 - 2018

Publications

(Submitted) Mohammad Saleh, Saeed Masoudnia, Saeed Shakuri , and Azadeh Tabatabaei. "Towards Trustworthy Multimodal AI: Review of Fairness, Transparency, and Ethical Implications in Vision-Language Tasks." 8th International Conference on Computers, information technology and applications of artificial intelligence (CITAAI), 2025.
(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) University of Science and Culture	Fall 2024
Artificial Intelligence (Undergraduate class) University of Science and Culture	Fall 2023
Machine Learning (Graduate class) University of Science and Culture	Fall 2022

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	
University of Science and Culture	Jul. 2023 & Jan. 2024
• Judging the final projects of computer science undergraduate students.	
Invited Presenter	
University of Science and Culture	Dec. 2022
• 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 <u>4 out of 4</u>:	
• 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.	
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