

Saeed Shakuri

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Overview

My research interests broadly lie in **Deep Learning** within real-world applications, with some emphasis on **Computer Vision**. I'm also greatly passionate about expanding my skills to **Multimodal Learning** and **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 May. 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, Alborz, 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.
- (Published)** **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](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](https://github.com/SaeedShakuri/Detectron2)
- Measuring sentence similarity with a TF-IDF approach.**
[Link: https://github.com/SaeedShakuri/ML-DL-Projects/tree/main/NLP](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](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](https://github.com/SaeedShakuri/ML-DL-Projects/tree/main/Ensemble%20Learning)

Professional Services

Posters Presented 2nd Symposium on Frontiers in Computer and Data Sciences <ul style="list-style-type: none">An Efficient Approach in Detecting Lung Nodules Using Swin Transformer.	Feb. 2025
Reviewer Elsevier - International Journal of Electrical and Computer Engineering Wiley - The Journal of Engineering Elsevier - Data in Brief Journal	Oct. 2024 Aug. 2023 Mar. 2023 - Apr. 2023
Judge University of Science and Culture <ul style="list-style-type: none">Judging the final projects of computer science undergraduate students.	Jul. 2023 & Jan. 2024
Invited Presenter University of Science and Culture <ul style="list-style-type: none">Presentation title: An Introduction to Few-Shot Learning	Dec. 2022

Work Experience

BlazingFallApps, remotely Software Developer <ul style="list-style-type: none">Developing various mobile applications using the Flutter framework and Dart programming language	Mar. 2020 - Nov. 2021
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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 an <u>A+</u> grade: <ul style="list-style-type: none">Natural Language ProcessingComputer VisionComputational Social NetworkArtificial Neural NetworksMachine LearningSeminarData Science MathematicsAdvanced AlgorithmsApplied Data Analysis	Spring 2023 Fall 2022 Fall 2022 Spring 2022 Spring 2022 Spring 2022 Fall 2021 Fall 2021 Fall 2021
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References

References are available upon request.