

Overview

My research interests broadly lie in Deep Learning methodologies within real-world applications and challenges. My current research focuses on Computer Vision methods in detecting lung nodules associated with lung cancer. The highlight of my research is as follows:

- I have authored a paper titled '**An Efficient Approach in Detecting Lung Nodules Using Swin Transformer**' and has been submitted to the 19th ICIS, 2024 (IEEE), which takes place on Oct. 23 and 24, 2024.
- I also have worked on employing Few-shot Learning methods in object detection for detecting lung nodules from CT scan images, and it's in the final phase and is going to be submitted to Computerized Medical Imaging and Graphics.
- I have also collaborated on two papers focused on the Image Classification domain within real-time emotion recognition (More info in the Publications section).

Research interests: Deep Learning, Computer Vision, Medical Image Analysis

Education

University of Science and Culture , Tehran, Iran M.S., Data Science Thesis: Few-shot lung nodule detection. GPA: 4 of 4 (19.05 of 20)	Oct. 2021 - Expected Feb. 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 A.S., Electronics engineering (Beheshti College)	2016 - 2018

Publications

(Submitted) 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 Experience

Teaching Assistant, Undergraduate Artificial Intelligence class University of Science and Culture	Fall 2023
Teaching Assistant, Graduate Machine Learning class University of Science and Culture	Fall 2022

Notable Academic Projects

All of the projects were implemented with Python in Google Colab	
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 and object detection projects using PyTorch Link: https://github.com/SaeedShakuri/Computer-Vision	
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 Wiley - The Journal of Engineering Elsevier - Data in Brief Journal	Aug. 2023 Mar. 2023 - Apr. 2023
Judge University of Science and Culture • Judging the final projects of computer science undergraduate students.	Jul. 2023 & Jan. 2024
Invited Presenter University of Science and Culture • Presentation title: An Introduction to Few-Shot Learning	Dec. 2022

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	

Masters 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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