

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' which has been submitted to the 10th ICSIE, 2024 (IEEE).
- I am currently working on employing Few-shot Learning methods in object detection for detecting lung nodules from CT scan images.
- I have also collaborated on two papers focused on the Image Classification task (More info in the Publications section).

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

Education

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| 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

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| (Submitted) Saeed Shakuri and Alireza Rezvanian. "An Efficient Approach in Detecting Lung Nodules Using Swin Transformer." 10th International Conference on Industrial and Systems Engineering (ICISE), 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

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| 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

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| Object detection with Detectron2 Language: Python, Link: https://github.com/SaeedShakuri/Detectron2 |
| Measuring sentence similarity with a TF-IDF approach Language: Python, Link: https://github.com/SaeedShakuri/Projects/tree/main/NLP |
| A few Deep Learning projects using PyTorch (Computer Vision) Language: Python, Link: https://github.com/SaeedShakuri/PyTorch.git |
| A classification project using Ensemble Learning with the Abalone dataset Language: Python, Link: https://github.com/SaeedShakuri/Projects/tree/main/Ensemble%20Learning |

Professional Services

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

Skills

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| 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

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| 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

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| References are available upon request. | |
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