

## Overview

My research interests broadly lie in **Deep Learning** within real-world applications, including but not limited to medical and healthcare domains, with some emphasis on **Multimodal Learning**, **Computer Vision**, and **NLP** (including **LLMs**), while examining their **Explainability** and **Interpretability**. My thesis focused on Computer Vision methods (Object Detection) in detecting lung nodules in CT scan images.

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

## Education

- **University of Science and Culture**, Tehran, Iran  
M.S., Data Science  
**Thesis:** Object detection using Few-shot Learning and Vision Transformers.  
**GPA:** 4 out of 4 (19.05 out of 20)  
**Thesis grade:** Excellent 2021 – 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

- (Published)** Saeed Shakuri and Alireza Rezvanian. "An Efficient Approach in Detecting Lung Nodules Using Swin Transformer." 19<sup>th</sup> 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." 10<sup>th</sup> 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."

## Teaching Assistant

- **Information Retrieval on the Web (Graduate class)** Fall 2024 & Fall 2025  
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

- **An Efficient Approach in Detecting Lung Nodules Using Swin Transformer**  
[Link: github.com/SaeedShakuri/Computer-Vision/blob/main/Lung\\_Nodule\\_Detection.ipynb](https://github.com/SaeedShakuri/Computer-Vision/blob/main/Lung_Nodule_Detection.ipynb)
- **Traffic Sign Detection Using Faster R-CNN, FPN, and Transfer Learning**  
[Link: 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: github.com/SaeedShakuri/Detectron2](https://github.com/SaeedShakuri/Detectron2)
- **Image classification using Transfer Learning, regularization terms, and SGD optimizer with PyTorch**  
[Link: 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: github.com/SaeedShakuri/ML-DL-Projects/tree/main/Ensemble%20Learning](https://github.com/SaeedShakuri/ML-DL-Projects/tree/main/Ensemble%20Learning)

## Professional Services

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- **Posters Presented** Feb. 2025  
2<sup>nd</sup> Symposium on Frontiers in Computer and Data Sciences  
An Efficient Approach in Detecting Lung Nodules Using Swin Transformer
- **Reviewer** Oct. 2024  
Elsevier - International Journal of Electrical and Computer Engineering  
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

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

## Skills

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- **Programming Languages**  
Python, Dart, C
- **Software and Tools**  
Google Colaboratory, EndNote, MiniTab, VSCode
- **Technological Proficiencies**  
PyTorch, Detectron2, OpenCV, NumPy, Matplotlib, Flutter
- **IELTS Academic**  
Overall: 7, Speaking: 7.5, Listening: 7, Writing: 6.5, Reading: 7

## Master's Courses

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### All of the courses received an A+ grade:

- 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.