



# MOHAMMAD REZA NADERI

Computer Vision Researcher

M.Sc. in Electrical and Computer Engineering

My webpage: [mohammadrezanaderi4.github.io](https://mohammadrezanaderi4.github.io)

## CONTACT

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Shahinshahr, Isfahan, Iran

Mohammadreza naderi

Mohammadrezanaderi4

## PROGRAMING

C

C++

Matlab

Python

Skilled in programming:

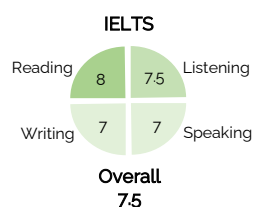
Pytorch

Tensorflow

## LANGUAGES

English

Farsi



## SUMMARY

I hold a master's degree in System Electrical and Computer Engineering from the esteemed Isfahan University of Technology, specializing in computer vision. My research spans diverse applications, including image analysis and generative models. I have authored seven papers in these fields and passed my master's thesis with a perfect score. With a strong academic background, ranking among the top students in both my BSc and MSc, and an IELTS score of 7.5, I am currently Vice President at a construction company, where I apply AI to interior design and branding tasks. I am now pursuing a PhD position to advance my studies in AI.

## EDUCATION

M. Sc. In Electrical and Computer Engineering (System Telecommunication)  
Isfahan University of Technology | 2019-2022 | Isfahan, Iran

- GPA: 17.14 out of 20
- Supervisor: Professor Dr. Shadrokh Samavi
- Research on: Image Processing, Domain Adaptation, Generative AI, Vision Transformers

B. Sc. In Electrical Engineering

Shiraz University of Technology | 2015-2019 | Shiraz, Iran

- GPA: 18.81 out of 20
- Ranked first between the electrical engineering students
- Honored as best students of the university

## PUBLICATIONS AND PROJECTS

SFI-Swin: Symmetric Face Inpainting with Swin Transformer by Distinctly Learning Face Components Distributions. (2024)

MohammadReza Naderi, MohammadHossein Givkashi, Nader Karimi, Shahram Shirani, and Shadrokh Samavi.

- Springer version: [doi.org/10.1007/s11042-024-19365-8](https://doi.org/10.1007/s11042-024-19365-8)
- Project page: <https://github.com/mohammadrezanaderi4/SFI-Swin>
- Multimedia tools and applications, Springer

Supervised deep learning for content-aware image retargeting with fourier convolutions. (2024)

MohammadHossein Givkashi, MohammadReza Naderi, Nader Karimi, Shahram Shirani, and Shadrokh Samavi.

- Springer version: [doi.org/10.1007/s11042-024-18876-8](https://doi.org/10.1007/s11042-024-18876-8)
- Multimedia tools and applications, Springer

Dynamic-Pix2Pix: Noise Injected cGAN for Modeling Input and Target Domain Joint Distributions with Limited Training Data.

MohammadReza Naderi, Nader Karimi, Ali Emami, Shahram Shirani, and Shadrokh Samavi. (2023)

- Elsevier version: [doi.org/10.1016/j.bspc.2023.104877](https://doi.org/10.1016/j.bspc.2023.104877)
- Biomedical Signal Processing and Control, Elsevier

Professional  
at

- Idea person
- Team work
- Team management
- Fast typing
- Professional Coding

OS  
PREFERENCE

- Windows
- Linux
- mac OS

Academic  
REFERENCES

Professor  
Shadrok h Samavi

Department of Electrical  
and Computer Engineering  
Isfahan University of  
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Ahmadzadeh

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and Computer Engineering  
Isfahan University of  
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Ahmadzadeh@iut.ac.ir

Aesthetic-aware image retargeting based on foreground-background separation and PSO optimization (2024).  
MohammadReza Naderi , Mohammad Hossein Givkashi, Nader Karimi, Shahram Shirani, and Shadrokh Samavi.

- Springer version: [doi.org/10.1007/s11042-023-16959-6](https://doi.org/10.1007/s11042-023-16959-6)
- Multimedia tools and applications, Springer

Color image segmentation using multi-objective swarm optimizer and multi-level histogram thresholding (2022).  
MohammadReza Naderi Boldaji, and Samaneh Hosseini Semnani.

- Springer version: [doi.org/10.1007/s11042-022-12443-9](https://doi.org/10.1007/s11042-022-12443-9)
- Multimedia tools and applications, Springer

Focal-UNet: UNet-like Focal Modulation for Medical Image Segmentation. (2023)  
MohammadReza Naderi, MohammadHossein Givkashi, Fatemeh Piri, Nader Karimi, and Shadrokh Samavi.

- Arxiv version: <https://arxiv.org/abs/2301.03130>
- Project page: <https://github.com/givkashi/Focal-UNet>

MSGDD-cGAN: Multi-Scale Gradients Dual Discriminator Conditional Generative Adversarial Network. (2021)  
MohammadReza Naderi, Zahra Nabizadeh, Nader Karimi, Shahram Shirani, and Shadrokh Samavi.

- Arxiv version: <https://arxiv.org/abs/2109.05614>

RESEARCH AREAS

- Medical Image Analysis:
- Ultrasound image segmentation
  - CT scan image segmentation
  - MRI segmentation
- Image Inpainting:
- Transformers
  - Generative adversarial networks
- Image Segmentation:
- Natural image segmentation using meta-heuristic algorithms
- Image Re-targeting:
- Natural image re-targeting using meta-heuristic algorithms
  - GANs
- Image Synthesising and Domain Adaptation
- Cycle Generative Adversarial Networks
  - Variational Auto Encoders
- Proficient in utilizing:
- Generative Adversarial Networks,
  - Transformers
  - Variational Auto Encoders

Work  
REFERENCE

Ebrahim  
Naderi Boldaji

Owner and CEO of  
Khozestan Holding  
Company which include

Kenzova Construction  
company

Zar Wood Company

Khozestan Chain Grocery  
Shops

Ebrahimnaderiboldaji@gmail  
il.com

Work Experience

Khozestan Holding Company | 2021-2024 | Isfahan, Iran

- Spearhead the application of AI technologies to revolutionize interior and exterior design for apartments and café-restaurants, ensuring innovative, functional, and aesthetically appealing results.
- Lead initiatives to leverage AI in catalog design, optimizing layouts, typography, and imagery tailored to target audiences.
- Oversee AI-driven marketing strategies, utilizing data insights to enhance customer engagement, streamline personalization, and boost ROI.
- Drive collaboration between creative teams and AI specialists, ensuring the seamless integration of cutting-edge technologies to meet client needs.