

Hossein Shakibania

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Homepage | Google Scholar | GitHub

EDUCATION

Bu-Ali Sina University

BSc in Computer Engineering, CGPA: 18.19/20, Rank: 1/50

Hamedan, Iran

Sep 2019 - Feb 2024

RESEARCH INTERESTS

- Computer Vision
- Visual Editing & Restoration
- Generative AI
- Scene Understanding
- Multimodal AI Systems
- Deep Learning

EXPERIENCE

Robot Intelligence & Vision Lab

Undergraduate Research Assistant - advisor: Prof. Hassan Khotanlou

Hamedan, Iran

May 2023 - Present

- Exploring diffusion models, VAE, and ViT architectures for cloud removal in satellite imagery.
- Proposed an autoencoder-based model for low-light image enhancement. Co-authored a research paper.

Intelligent Systems & Machine Learning Lab

Undergraduate Research Assistant - advisor: Dr. Muharram Mansoorizadeh

Hamedan, Iran

Oct 2022 - May 2023

- Proposed a deep learning network and a dataset for detecting and grading diabetic retinopathy.
- Published a research paper in the BSPC journal.

AIEX Co.

Software Developer - Remote

Vancouver, BC, Canada

Oct 2021 - Mar 2023

- An all-in-one platform for training & deploying supervised deep learning-based computer vision models.
- Developed multiple services within Software and AI teams, including dataset preparation, data augmentation pipeline, image tiling with annotation preservation, backend APIs, etc. using Python, PyTorch, and OpenCV.

PUBLICATIONS

1. **H. Shakibania**, S. Raoufi, H. Khotanlou, "CDAN: Convolutional Dense Attention-guided Network for Low-light Image Enhancement," *arXiv*, 2023.
2. **H. Shakibania**, S. Raoufi, B. Pourafkham, H. Khotanlou, M. Mansoorizadeh, "Dual branch deep learning network for detection and stage grading of diabetic retinopathy," *Biomedical Signal Processing and Control*, 2024.

TEACHING

Teaching Assistant at Bu-Ali Sina University

Hamedan, Iran

- Digital Image Processing (Lecturer: Prof. Hassan Khotanlou) Fall 2023
- Computer Vision (Lecturer: Prof. Hassan Khotanlou) Fall 2023
- Data Mining (Lecturer: Dr. Muharram Mansoorizadeh) Fall 2023
- Design of Algorithms (Lecturer: Dr. Mir Hossein Dezfoulian) Winter 2023
- Databases (Lecturer: Dr. Morteza Yousef Sanati) Fall 2022
- Data Structures (Lecturer: Dr. Samira Khodabandehlou) Winter & Fall 2022

SKILLS & TECHNICAL TOOLS

Programming: Python, C/C++, L^AT_EX

Machine Learning Tools: PyTorch, OpenCV, Scikit-Learn, XGBoost, Pandas, NumPy, Matplotlib

Languages: Persian (native), English (proficient, IELTS Academic 7.5)

Others: Git, Docker, Django

HONORS AND AWARDS

- Distinguished Undergraduate Student for Academic Excellence (1st Rank), *Bu-Ali Sina University* Jan 2024
- 2nd Place in the Data-Driven Decision Making Competition, *Bu-Ali Sina University* May 2023

REFERENCES

Prof. Hassan Khotanlou

Professor, Bu-Ali Sina University

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Dr. Muharram Mansoorizadeh

Associate Professor, Bu-Ali Sina University

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