Hossein Shakibania

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🏠 Homepage | 🎓 Google Scholar | ⭘ GitHub | 🔗 LinkedIn

RESEARCH INTERESTS

Generative Models, Multimodal AI, Controllable Image Editing & Creative AI

EDUCATION

Technical University of Darmstadt Darmstadt, Germany
MS in Artificial Intelligence & Machine Learning Oct 2024 - Present

Bu-Ali Sina University Hamedan, Iran
BS in Computer Engineering Sep 2019 - Mar 2024
- CGPA: 18.19/20, Ranking: 1st out of 50

EXPERIENCE

Robot Intelligence & Vision Lab Hamedan, Iran
Undergraduate Student Researcher - Advisor: Prof. Hassan Khotanlou May 2023 - Jun 2024

- Collaborated on a project focused on cloud removal from satellite imagery.
- Proposed an autoencoder-based model for low-light light image enhancement. Published a journal paper.

Intelligent Systems & Machine Learning Lab Hamedan, Iran
Undergraduate Student Researcher - Advisor: Prof. Muharram Mansoorizadeh Oct 2022 - Apr 2023

- Proposed a framework and curated a dataset for detecting and grading diabetic retinopathy.
- Published a journal paper and assisted in reviewing multiple research papers.

AIEX Co. Vancouver, Canada · Remote
Software Developer Oct 2021 - Mar 2023

- An all-in-one platform for training & deploying deep learning-based computer vision models. [YouTube]
- Developed multiple services within Software and AI teams, including dataset preparation, data augmentation pipeline, image tiling, dataset health-check, backend APIs, etc. using Python, PyTorch, and Django.

PUBLICATIONS

1. **H. Shakibania**[†], S. Raoufi[†], H. Khotanlou, "CDAN: Convolutional dense attention-guided network for low-light image enhancement," *Digital Signal Processing*, 2024. [arXiv] [Code]

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.

[†] *denotes equal contribution.*

TEACHING EXPERIENCE

Teaching Assistant at Bu-Ali Sina University Feb 2022 - Feb 2024

- *Digital Image Processing, Foundations of Computer Vision, Foundations of Data Mining, Design of Algorithms, Databases, Data Structures (2 semesters)*

HONORS AND AWARDS

- **5th Place** in the Computer Vision Track, Tech Olympics 2024, among 455 teams, *Tehran, Iran* Oct 2024
- **Ranked 1st** in the Computer Engineering Department, Class of 2024, *Bu-Ali Sina University* Mar 2024
- **Outstanding Undergraduate Student** for Academic Excellence, *Bu-Ali Sina University* Jan 2024
- **2nd Place** in the Data-Driven Decision-Making Competition, *Bu-Ali Sina University* May 2023

SKILLS & TECHNICAL TOOLS

Programming: Python, C/C++
ML/CV Tools & Libraries: PyTorch, OpenCV, Scikit-Learn, Pandas, NumPy, Matplotlib
Languages: Persian (native), English (proficient, IELTS Academic 7.5)
Others: Git, LaTeX, Linux

Relevant Coursework

Bu-Ali Sina University
- *Pattern Recognition, Foundations of Computer Vision, Foundations of Data Mining, Information Retrieval & Web Search, Artificial Intelligence & Expert Systems, Design of Algorithms, Data Structures*

MOOCs
- *Deep Generative Models (Stanford CS236), Advanced Computer Vision (UCF CAP6412)*

Oxford Machine Learning Summer School 2023
- *43 hours of lectures on ML fundamentals, cases, and applications from renowned researchers.* [Certificate]

References

Prof. Hassan Khotanlou   Iran
Professor, Bu-Ali Sina University
- Email: khotanlou@basu.ac.ir

Prof. Muharram Mansoorizadeh   Iran
Associate Professor, Bu-Ali Sina University
- Email: mansoorm@basu.ac.ir