Muhammad Abrar Ahmad Khan

Date of birth: 15 Jun 1992 | **Nationality:** Pakistani | **Phone number:** (+92) 03219595417 (Mobile) | **Email address:** mabrar009@gmail.com | **Facebook:** https://www.facebook.com/AbrarRana01 | **Instagram:** https://www.instagram.com/abrarrana01 | **LinkedIn:** https://www.linkedin.com/in/abrarrana01 | **WhatsApp Messenger:** +92-321-9595417 |

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ABOUT ME

I earned my Bachelor's degree in computer science from Allama Iqbal Open University Islamabad, Pakistan, in 2019. I obtained my Master's degree from COMSATS University Islamabad, Pakistan, in 2022. My research interests include Machine Learning applications in Medical Imaging, Agricultural Imaging, and Hyperspectral Imaging. I am also working on gait analysis using deep learning for real-world applications.
Nature-inspired algorithms captivate me, particularly bio-inspired optimization algorithms, making them a focal point of my interest.

WORK EXPERIENCE

28 FEB 2024 – CURRENT Taxila, Pakistan

COMPUTER SCIENCE LECTURER HITEC UNIVERSITY TAXILA

In my role as a university lecturer, I undertake a multitude of responsibilities. These include crafting engaging lectures and delivering them to students, formulating and assessing assignments and exams, pursuing research endeavors, disseminating findings through academic papers, guiding and supporting students through advising and mentoring, and actively contributing to departmental and university initiatives. Additionally, I supervise graduate students, collaborate on academic committees, and interact with the wider scholarly community through conferences, workshops, and various other academic engagements.

27 FEB 2023 – 26 FEB 2024 Islamabad, Pakistan

COMPUTER SCIENCE LECTURER FOUNDATION UNIVERSITY ISLAMABAD (FUSST)

As a university lecturer, I wa responsible for creating and delivering lectures, designing and grading assignments and exams, conducting research, publishing academic papers, advising and mentoring students, and participating in departmental and university activities. Supervising graduate students and serving on academic committees, as well as engaging with the broader academic community through conferences, workshops, and other scholarly activities.

1 MAR 2020 – 30 JUN 2021 Rawalpindi, Pakistan

VISITING JUNIOR LECTURER BURAQ INSTITUTE OF SCIENCE AND TECHNOLOGY (STUDY CENTER OF AIOU)

As a visiting junior lecturer, I was committed to provide high-quality education and foster a supportive and inclusive learning environment for all students. I brought a fresh perspective and expertise in a specific field of study to the university community, and work closely with faculty members and administrators to ensure that my teaching aligns with the university's academic standards and goals.

EDUCATION AND TRAINING

15 SEP 2020 – 22 JUL 2022 wah cantt, Pakistan

MS (COMPUTER SCIENCE) COMSATS University Islamabad, Wah Campus Wah Cantt, Punjab

Website https://cuiwah.edu.pk/ | **Field of study** Computer Vision / Deep Learning | **Final grade** 3.73 / 4.00 |

Thesis Human Gait Analysis in Video Sequences Using Deep Fusion Assisted Framework and Evolutionary Technique

10 JAN 2015 – 10 APR 2019 Islamabad, Pakistan

BS (COMPUTER SCIENCE) Allama Iqbal Open University Islamabad

Website https://www.aiou.edu.pk | **Field of study** Machine learning, Artificial Intelligence | **Final grade** 3.39 / 4.00 |

Thesis An Artificial Intelligence Based Automatic Detection of Veins Blockage Language

1 APR 2010 – 1 AUG 2013 Islamabad, Pakistan

INTERMEDIATE IN COMPUTER SCIENCES (ICS) Federal BISE

Website https://www.fbise.edu.pk | **Field of study** Computer Science | **Final grade** 582 / 1100

1 APR 2006 – 1 AUG 2008 Multan, Pakistan

MATRICULATION WITH SCIENCE BISE Multan

Website https://web.bisemultan.edu.pk/ | **Field of study** Science Group | **Final grade** 709/850

LANGUAGE SKILLS

Mother tongue(s): **URDU**

Other language(s):

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken production	Spoken interaction	
ENGLISH	B2	B2	A2	A2	B1

Levels: A1 and A2: Basic user; B1 and B2: Independent user; C1 and C2: Proficient user

DIGITAL SKILLS

Computer VIsion | Artificial Ingelligence | Machine Lerarning | Deep learnming | Basic knowledge of C and Matlab | Microsoft Office

PUBLICATIONS

2024

BAHGRF3 : Human gait recognition in the indoor environment using deep learning features fusion assisted framework and posterior probability moth flame optimisation

Muhammad Abrar Ahmad Khan, Muhammad Attique Khan, Ateeq Ur Rehman, Ahmed Ibrahim Alzahrani, Nasser Alalwan, Deepak Gupta, Saima Ahmed Rahin, Yudong Zhang

CAAI Transactions on Intelligence Technology

PROJECTS

1 JUN 2021 – 1 JUL 2022

Thesis (Masters)

Title: Human Gait Analysis in Video Sequences Using Deep Fusion Assisted Framework and Evolutionary Technique
Language: MATLAB
Tools: MATLAB
Datasets: CASIA-B
Details: Aim was to developa novel fully automated method is proposed for Human Gait Recognition under various view angles using deep learning. Four primary steps are involved such as: preprocessing of original video frames, exploiting pre-trained EfficientNet and MobileNetV2 CNN models for features extraction, reduction of additional features from extracted vector based on a hybrid selection method, and finally recognition using supervised learning methods. The extraction of CNN features is a key step in which our target is to extract the most active features. To achieve this goal, we fuse the features of both CNN models in a parallel process. In a later stage, the best features are selected through the Multi-swarm Improved Moth Flame Optimization (MIMFO) approach. The evaluation of pro-posed methodology is performed using ten different classifiers and achieved max accuracy 96.9%, 95.7%, 94.4%, 93.9%, 82.9%, 86.8%, 90.0%, 89.0%, 89.7%, 95.1%, and 99.7% for angles 0°, 18°, 36°, 54°, 72°, 90°, 108°, 126°, 144°, 162°, and 180° respectively.

1 JAN 2018 – 1 JAN 2019

Final Year Project (Bachelors)

Title: An Artificial Intelligence Based Automatic Detection of Veins Blockage
Language: MATLAB
Tools: MATLAB
Details: The Artificial Intelligence Based Automatic Detection of Veins Blockage system is an off-line system for any medical laboratory. The proposed system will assist doctors to accurately highlight blockage with high accuracy and less consumption time. An angiographic image will be used as the input in this system and the image processing techniques will be applied on the angiography mage. This system will diagnose the disease by using some phases of Image processing, like gray scale conversion, histogram equalization, Edge Detection, and color transformation, to highlight the blockage.

Final Year Projects (Supervised)

- Face Mask Detection System using Machine Learning.
- Skin Cancer Detection
- DizziDrive – An application for drivers to avoid Dizziness during driving
- Transport Management System for University Students

HONOURS AND AWARDS

13 NOV 2023

AI For Everyone – DeepLearning.AI

8 JAN 2024

Introduction to Image Generation – Google Cloud

16 JAN 2024

Introduction to Generative AI – Google Cloud

KEY RESPONSIBILITIES

Courses Taught at BS Level

- Programming Fundamentals
- Data Structures and Algorithms
- Digital Logic Design
- Introduction to Machine Learning
- Object Oriented Programming
- Introduction to Cryptography

Management Responsibilities

- Departmental Deputy Superintendent Examination
- Member of OBE Team
- Active Participant in NTC and NCEAC Visits
- Assisted in Designing & Updating Curriculums of New BS Programs
- industry-academic collaboration team member