Contact

www.linkedin.com/in/dr-muhammad-adeel-nisar (LinkedIn)
www.pucit.edu.pk (Company)

Top Skills

Python (Programming Language)
Computer Vision
Artificial Intelligence (AI)

Muhammad Adeel Nisar

Assistant Professor @ University of the Punjab | Doctor of Engineering - Pattern Recognition
Lahore District, Punjab, Pakistan

Summary

With a rich background spanning over two decades, I am a seasoned PhD doctor specializing in sensor-based human activity recognition for assistive health technologies. My expertise lies at the intersection of academia and industry, having dedicated 19 years to teaching at Punjab University, coupled with seven years of hands-on experience in machine learning and data science. My proficiency extends to the analysis of multimodal time-series sensor data, with a particular focus on leveraging audio and video data for applications such as sentiment analysis. Additionally, I excel in healthcare generative AI, employing my skills to contribute significantly to fields such as physical activity recognition for health assessment and the identification of neurological diseases. Furthermore, I have delved into pioneering areas like hunger detection for metabolic assessment and mental flow analysis to gauge individual focus levels in professional settings. My diverse portfolio underscores my commitment to pushing the boundaries of innovation and leveraging technology to address pressing societal challenges.

Experience

University of the Punjab
20 years 7 months

Assistant Professor
July 2009 - Present (16 years 3 months)
Lahore, Pakistan

Lecturer
March 2005 - July 2009 (4 years 5 months)

Universität zu Lübeck
Scientific Researcher
July 2021 - July 2022 (1 year 1 month)
Lübeck, Germany

I worked in a project named "ScreenFM" as a researcher. The purpose of the project is to analyze the general movements (GMs) of young infants and to detect a kind of GMs called Fidgety Movements (FMs). Absence of FMs might lead to neurological disorders in young infants. A learning-based pattern recognition platform that is intended to automate the investigation of fidgety movements using algorithms is being developed. As data input, we use images from two RGBD (i.e. color and depth) cameras (Microsoft Kinect Azure and iPhone 12 Pro) and four Inertial Measurement Units (IMUs) sensors (Suunto Movesense IMU) placed on the infants' shoulders and hips. Following the standard methodology of pattern recognition, the platform's classification algorithms are trained with sensor data provided by our consortium's medical experts.

Motognosis

Data Scientist

March 2020 - April 2021 (1 year 2 months)

Berlin, Germany

I worked at Motognosis as Data Scientist for 3D Modelling Using Video Data. The purpose of this research work is to process and analyze the depth video data for 3D pose estimation. The outcomes of pose estimation lead towards the tracking of joints of a human body, involving both adults and infants, during their physical activities. I also generated the 3D models of humans while tracking the movements of their limbs.

Universität Siegen

2 years 11 months

Scientific Researcher

January 2019 - February 2020 (1 year 2 months)

Siegen, Germany

I worked at SenseVojta Project as a machine learning researcher. The purpose of this research work is to analyze time-series data and development of activity recognition model using wearable sensors data with the fusion of angle information of the joints of human body that is extracted through video data recorded by Kinect depth camera.

Research Assistant

April 2017 - January 2019 (1 year 10 months)

Siegen, Germany

I worked as a research assistant at Cognitive Village Project. My work includes analysis of wearable sensors’ data and development of Hierarchical Activity

Recognition Framework with the fusion of different wearable sensor modalities aiming to recognize activities of daily living, for example, cleaning a room, preparing meal, taking care of personal hygiene etc., in order to evaluate the level of independent living of elderly people.

Education

Universität zu Lübeck
Doctor of Engineering - Pattern Recognition, Computer Science

Università degli Studi dell'Aquila
Master of Philosophy - MPhil, Artificial Intelligence

University of the Punjab
MS, Computer Science

University of the Punjab
MSc, Computer Science

University of the Punjab
Graduation, Applied Mathematics