

4th International Congress on Primary Health Care & 2nd Euro Nursing Congress

September 15–16 | Virtual Event



Zahid Hasan

Charter University NCBA&E Main Campus Lahore
Pakistan

Telemedicine: An intelligent diagnostic system based on cognitive medical robotic technology empowered with machine learning approaches

Abstract:

The rising global burden of chronic diseases demands innovative diagnostic solutions to ensure early detection, effective monitoring, and personalized treatment. Traditional diagnostic processes are often limited by errors and delays, leading to adverse patient outcomes. With the rapid growth of digital health data including diagnoses, treatments, and medications machine learning (ML) technologies provide new opportunities to enhance healthcare accuracy and accessibility. This research presents an intelligent cognitive diagnostic system for telemedicine, designed to improve the early diagnosis and monitoring of chronic illnesses. The framework integrates Cognitive Medical Robotic Technology, the Internet of Medical Things (IoMT), and wearable devices for real-time patient data collection, combined with advanced ML algorithms such as Artificial Neural Networks (ANN). The system emulates human cognitive skills, enabling perception, contextual understanding, and decision-making to deliver accurate diagnoses and personalized treatment recommendations. Results indicate that this approach surpasses traditional methods in precision, efficiency, and patient satisfaction, offering a transformative step forward in telemedicine.

Biography

Zahid Hasan is Associate Professor in the Department of Computer Science and Director of Advanced Study & Research (DASAR) at NCBA&E, Pakistan. He earned his PhD in Computer Science and has published more than 25 papers in reputed journals. He also serves on the editorial boards of several academic institutes and continues to contribute actively to research in cognitive robotics, telemedicine, and artificial intelligence.