

Artificial Intelligence Technology in Smart Healthcare Informatics



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Abstract :

Artificial Intelligence (AI) is devoted to create intelligent software and hardware that imitates the human mind. The main goal of AI as a science and technology is to make computers smarter by creating software that will allow a computer to mimic some of the functions of the human brain in selected applications. The main subareas of AI research include; general problem solving, knowledge engineering

and management, expert systems, natural language processing, computer vision, computational intelligence, machine learning and robotics. And AI can support many tasks and domains ,e.g. law, education and healthcare , economy ,business ,environment ,energy and military applications.. All of these applications employ knowledge base and inferencing techniques to solve problems or help make decisions in specific domains.

Recently, AI paradigms and techniques have become more widespread within the fields of healthcare, life sciences, biology and medical sciences . Developing of smart systems in these fields is very difficult and complex t from the technological perspective and a challenging task. In this talk we focus our discussion around the most efficient AI paradigms and ML used in developing such systems; namely: case-based reasoning, artificial neural networks, ontological engineering, and data mining. In addition, the talk presents some examples of the developed systems by the author and his colleagues at AIKER-Labs for cancer, heart, brain tumor diagnose and thrombosis diseases are discussed.

Bio :

Prof. Abdel-Badeeh M. Salem is a full Professor of Computer Science since 1989 at Faculty of computer and information sciences, Ain Shams University, Egypt. His research includes intelligent computing, artificial intelligence, biomedical informatics, big data analytics, intelligent education and smart learning systems, information mining, knowledge engineering and Biometrics. He is the Founder and Chairman of the Artificial Intelligence and Knowledge Engineering Research Labs, Ain Sham University, Cairo, Egypt. He is Chairman of Working Group on Bio-Medical Informative, ISfTeH, Belgium He has published around 700 papers (115 of them in Scopus). He has been involved in more than 700 International conferences and workshops as; a keynote and plenary speaker, member of Program Committees , workshop/invited session organizer , Session Chair and Tutorials.. In addition he was a member of many international societies. In addition he is a member of the Editorial Board of 70 international and national Journals. Also, He is member of many Int. Scientific Societies and associations elected member of Euro Mediterranean Academy of Arts and Sciences, Greece. Member of Alma Mater European of the European Academy of Sciences and Arts, Belgrade and European Academy of Sciences and Arts, Austria.