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Knowledge Engineering Paradigms for Bio-Medical Informatics and
Smart Healthcare Systems

Abstract: Knowledge engineering (KE) deals with the development of intelligent information systems in which knowledge and reasoning play pivotal role. KE is a subfield of artificial intelligence (AI) and includes: knowledge acquisition, knowledge-based systems, knowledge compilation, intelligent shells and tools, methodologies, ontological engineering, knowledge discovery, and knowledge representation. This talk is devotes to the KE paradigms and techniques and their potential usage in developing new generation for Bio-Medical Informatics and Smart Healthcare Systems. In addition, the talk discusses the following KE paradigms: (a) knowledge representation techniques, (b) ontological engineering, (c) data mining and knowledge discovery Moreover, the talk presents the challenges as well as the current research directions in the areas of digital health informatics. 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 Alzheimer, thrombosis and COVID-19 diseases.