Remote patient triage and prioritization in mobile telemedicine services

Omar Hussein Salman
Al Iraqia University, Iraq

The more the worldwide population gets older, the bigger is the need for technologies to monitor and assist patients in healthcare applications. Consequently, in order to accommodate the increasing number of users, the remote patient monitor one of the issues that telemedicine, mobile technology and Wireless Body Area Networks (WBAN) have to tackle on, and it constitutes the main focus of this research. To provide healthcare services for a huge number of users, the healthcare providers triage the patients. Triaging involves an initial sorting of patients in order to prioritize the most emergency patients and to ensure by providing them the appropriate and rapid healthcare services. This study proposes a framework to improve the remote triaging and remote prioritization processes for the patients who are in places that are far from the ED and with no triage nurse. The proposed framework named Multi Sources Healthcare Architecture (MSHA) considers multi-heterogeneous sources: Sensors (ECG, SpO2 and Blood Pressure) and text-based inputs from mobile and pervasive devices of WBAN. Simulation results based on datasets for different symptoms of heart diseases demonstrate the superiority of MSHA algorithms as compared to benchmark algorithms in terms of triaging and prioritizing patients remotely in healthcare applications.

Biography

Omar Hussein Salman completed his graduation from Gifted Secondary in Baghdad with Diploma in 2001. Then, he joined Al Nahrain University, Baghdad and completed his BSc in Computer Engineering in 2004. He completed his MSc in Computer Engineering in 2007. In 2008, he joined the Iraqi University in Baghdad. He completed his PhD in Computer Systems Engineering from University Putra Malaysia in 2016 and his research was focused on “Multi-sources data fusion processing in telemedicine”. During his PhD. he got patent and published a research article. His research interest includes “Data processing, algorithms, remote applications, bioinformatics, telemedicine and healthcare services”.

omarwsn@gmail.com

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