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Designing a Patient Monitoring System Using Cloud and Semantic Web Technologies

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Abstract : Moving into a new era of healthcare, new tools and devices are developed to extend and improve health services, such as remote patient monitoring and risk prevention. In this concept, Internet of Things (IoT) and Cloud Computing present great advantages by providing remote and efficient services, as well as cooperation between patients, clinicians, researchers and other health professionals. This paper focuses on patients suffering from bipolar disorder, a brain disorder that belongs to a group of conditions called effective disorders, which is characterized by great mood swings.We exploit the advantages of Semantic Web and Cloud Technologies to develop a patient monitoring system to support clinicians. Based on intelligently filtering of evidence-knowledge and individual-specific information we aim to provide treatment notifications and recommended function tests at appropriate times or concluding into alerts for serious mood changes and patient's non-response to treatment. We propose an architecture, as the back-end part of a cloud platform for IoT, intertwining intelligence devices with patients' daily routine and clinicians' support.

Keywords : bipolar disorder, intelligent systems patient monitoring, semantic web technologies, healthcare
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