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Thème

Real-Time CardioVascular disease detection and prevention using Deep Learning techniques Apache Spark Streaming

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Abstract

Connected Care is today's most dynamic health technology phenomenon. Connected Care has a significant impact on patients and healthcare stakeholders, and achieves the triple aim of quality care, coordination and cost savings. To achieve such a goal, new models of care connecting patients and physicians must be considered using cutting-edge technologies (Big Data, IoT, data streaming, etc.) that offer many potentially revolutionary advantages in today's digital world. In addition, new intelligent management approaches for disease detection and prevention need to be implemented using innovative technologies and solutions namely: Neural Network and Deep Learning.

The objective of this project is to implement a Big Data platform for real-time monitoring and diagnosis of patients with heart disease. This platform allows, on the one hand, to remotely monitor the state of health of patients using MySignal card sensors(ECG sensor, blood pressure sensor and temperature sensor) returning the signals,electrocardiograms, Blood pressure and temperature of patients, And on the other hand, to set up an intelligent diagnostic system for various cardiovascular diseases using Deep Learning techniques for times Series Forecasting Big Data Stream Analysis.

Keywords : E-health, Big data, Deep learning, IOT, Apache Kafka, Apache spark.