Adapting distributed stream processing technologies for the automation of modern health care systems

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Abstract— With the increase in population, there is an increasing number of patients. Subsequently, we also see an increase in the amount of patient data that needs to be processed, further emphasizing the need for new systems and developments that can handle such large quantities of big data. To this end, this paper proposed a potential solution to this problem in the form of a system that can analyze a patient's data in real-time, providing doctors and other intended healthcare personnel with an immediate report of a patient's situation, allowing for a quicker response time, better treatment, and the first step towards a grand realized smart hospital system in the long-term. This system, aided by the rapid analysis of Apache Flink, produces the requested data to the doctor as intended, enabling for a swift response time to patient issues, thus highlighting a unique approach to the field, a contrast to other previous research in this field where there is a lack of said provisions.

Keyword— Big Data, Smart Healthcare, Distributed Systems, Bioinformatics

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