The Analysis of Big Data Architecture for Healthcare Service, a Case Study of a Public Hospital

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Abstract

Digital technologies bring about massive change in society and consequently presents emerging patterns of activities in all sectors. Healthcare systems have to adapt to the change by taking advantage of disruptive technology and innovation. Big data is one of the promising technologies which helps healthcare sector improve patient experience, reduce cost of treatment, predict epidemics, and provide competitive healthcare services. This paper aims to study and analyze big data architecture for healthcare service in a case study public hospital in Thailand. According to the study, big data architecture for the public hospital comprises data acquisition, data aggregation, data analytics, data visualization, health data center on cloud, and data governance. The results provide architecture that can be applied as a solution for big data processing in order to implement big data in the public hospital successfully.

Keywords: Big Data, Architecture, Healthcare service, Public hospital