



Chapter 10 - Health care cube integrator for health care databases

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Abstract

This chapter proposes the conceptual framework, designing framework, and implementation framework of the Health Care Cube integrator. The Health Care Cube integrator is a knowledgebase that stores health records collected from various health care databases. Furthermore, the health record is used for health analytics and discovery of health knowledge from an individual and an organizational viewpoint. Based on a research publications review and research gap, the research objective is defined: to delineate and develop the Health Care Cube knowledgebase. Healthcare Cube is the name given to knowledge based in the NoSQL database MongoDB, the disruptive database technologies. The Health Care Cube knowledgebase stores a variety of data in schema-free form, contains the health records of employees of an organization, and integrates employee health records from assorted databases. To extract data from assorted databases, we have developed an extraction, transformation, and loading (ETL) processing tool, the healthcare cube integrator (HCI), using django python. We have implemented the complete system in AWS cloud. Thus, through the proposed framework, HCI is step forward toward providing integrated health care databases with the health care knowledgebase. We have tested this solution with the employees of organizations and with their medical facilitators like doctors, pathological labs, etc. We have identified the benefits gained and challenges faced in the smooth execution of generating health analytics. This chapter is organized in five sections.