Healthcare Delivery Organizations (HDOs) in developing countries have been faced with a number of problems due to their mode of operations. Amongst the problems are improper modes of data storage, insecurity of patient medical records, difficulty in accessing quality healthcare services, high cost of medical services, and inaccurate diagnosis and therapy procedures. In recent times, research has identified Cloud Computing (CC) as a new and substantial business model capable of providing efficient services that would benefit the healthcare industry. Despite its numerous advantages, CC has not been able to provide efficient means of securing medical data and it also lacks adequate data mining tools. This research therefore, proposes an enhanced model that integrates HDOs in developing countries into the cloud. The proposed model consists of a Data Security and User Authentication Engine.
(DSUAE) which prevents unauthorized access to patient medical records and as well employs standard encryption/decryption techniques to guarantee confidentiality of such records. The model also contains a Data Mining/Analysis and Pattern Prediction Engine (DMAPPE) which provides useful information that aids decision making through standard Data Mining techniques.

References


- Technology Firms and Health Care, "Heads in the Clouds-Digitizing America’s Health Records Cloud be a Huge Business. Will It?" The Economist (US)2011; 399(8727):63.


Enhanced Cloud based Model for Healthcare Delivery Organizations in Developing Countries

2011; 30(2):231-240.
- J. Roberson, and D. Dehart, &quot;Robertson Research Institute&quot; &amp; K. Toll, and D. Hecherman, &quot;Microsoft Research,&quot; &quot; Healthcare Delivery in Developing Countries: Challenges and Potential Solutions,&quot; 2009.
- D. Simba, K. Dan, and G. Kiangi, &quot;Community Based Health Care: The case of Mufindi District, Tanzania,&quot; Tropical Institute of Community Health Publication, Nairobi, Kenya, 2003.
Enhanced Cloud based Model for Healthcare Delivery Organizations in Developing Countries

Index Terms

Computer Science

Cloud Computing

Keywords

Cloud Computing  Healthcare Organization  Data Mining  Data Security  Electronic Health Record