**LITERATURE SURVEY:**

**1)Mobile Cloud-Based Big Healthcare Data Processing in Smart Cities**

**AUTHORS:**Islam M

In recent years, the Smart City concept has become popular for its promise to improve the quality of life of urban citizens. The concept involves multiple disciplines, such as Smart health care, Smart transportation, and Smart community. Most services in Smart Cities, especially in the Smart healthcare domain, require the real-time sharing, processing, and analyzing of Big Healthcare Data for intelligent decision making. Therefore, a strong wireless and mobile communication infrastructure is necessary to connect and access Smart healthcare services, people, and sensors seamlessly, anywhere at any time. In this scenario, mobile cloud computing (MCC) can play a vital role by offloading Big Healthcare Data related tasks, such as sharing, processing, and analysis, from mobile applications to cloud resources, ensuring quality of service demands of end users. Such resource migration, which is also termed virtual machine (VM) migration, is effective in the Smart healthcare scenario in Smart Cities. In this paper, we propose an ant colony optimization-based joint VM migration model for a heterogeneous, MCC-based Smart Healthcare system in Smart City environment. In this model, the user's mobility and provisioned VM resources in the cloud address the VM migration problem. We also present a thorough performance evaluation to investigate the effectiveness of our proposed model compared with the state-of-the-art approaches.

**2)Opportunities and Challenges of Cloud Computing to Improve Health Care Services**

**AUTHORS:**.Mu-Hsing Kuo A

Cloud computing is a new way of delivering computing resources and services. Many managers and experts believe that it can improve health care services, benefit health care research, and change the face of health information technology. However, as with any innovation, cloud computing should be rigorously evaluated before its widespread adoption. This paper discusses the concept and its current place in health care, and uses 4 aspects (management, technology, security, and legal) to evaluate the opportunities and challenges of this computing model. Strategic planning that could be used by a health organization to determine its direction, strategy, and resource allocation when it has decided to migrate from traditional to cloud-based health services is also discussed.

**3)Towards Practical Privacy-Preserving Analytics for IoT and Cloud Based Healthcare Systems**

**AUTHORS:**.Sharma S,Chen K,Sheth A

Modern healthcare systems now rely on advanced computing methods and technologies, such as Internet of Things (IoT) devices and clouds, to collect and analyze personal health data at an unprecedented scale and depth. Patients, doctors, healthcare providers, and researchers depend on analytical models derived from such data sources to remotely monitor patients, early-diagnose diseases, and find personalized treatments and medications. However, without appropriate privacy protection, conducting data analytics becomes a source of a privacy nightmare. In this article, we present the research challenges in developing practical privacy-preserving analytics in healthcare information systems. The study is based on kHealth-a personalized digital healthcare information system that is being developed and tested for disease monitoring. We analyze the data and analytic requirements for the involved parties, identify the privacy assets, analyze existing privacy substrates, and discuss the potential tradeoff among privacy, efficiency, and model quality.

**4)Electronic Health System is underlying security and privacy**

**AUTHORS:**Casola V, Castiglione A, Choo K, Esposito C

Concerns over the privacy and security of electronic health information fall into two general categories: (1) concerns about inappropriate releases of information from individual organizations and (2) concerns about the systemic flows of information throughout the health care and related industries. Inappropriate releases from organizations can result either from authorized users who intentionally or unintentionally access or disseminate information in violation of organizational policy or from outsiders who break into an organization's computer system. The second category—systemic concerns—refers to the open disclosure of patient-identifiable health information to parties that may act against the interests of the specific patient or may otherwise be perceived as invading a patient's privacy. These concerns arise from the many flows of data across the health care system, between and among providers, payers, and secondary users, with or without the patient's knowledge. These two categories of concerns are conceptually quite different and require different interventions or countermeasures.

**5)Designing cloud-based electronic health record system with attribute-based encryption**

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With the development of cloud computing, electronic health record (EHR) system has appeared in the form of patient-centric, in which patients store their personal health records (PHRs) at a remote cloud server and selectively share them with physicians for convenient medical care. Although the newly emerged form has many advantages over traditional client-server model, it inevitably introduces patients’ concerns on the privacy of their PHRs due to the fact that cloud servers are very likely to be in a different trusted domain from that of the patients. In this paper, aiming at allowing for efficient storing and sharing PHRs and also eliminating patients’ worries about PHR privacy, we design a secure cloud-based EHR system, which guarantees security and privacy of medical data stored in the cloud, relying on cryptographic primitive but not the full trust over cloud servers. Based on our proposed basic EHR system, we provide several extensions including adding searchability, supporting revocation functionality and enabling efficient local decryption, which fills the gap between theoretical proposal and practical application.