**LITERATURE SURVEY**

**1) A Review of Cloud Computing Technology Solution for Healthcare System**

**AUTHORS:**  Masrom, Maslin, and Ailar Rahimli

Previously the traditional healthcare information system that used in the healthcare sector was the paper-based and then later it was replaced by the Healthcare Information System (HIS). However the HIS was found not perform effectively because of several issues such as storage capacity, system integration, high operating cost and system maintenance. Cloud computing is a new technology that deliver the software, infrastructure and computational platform as a service over the Internet in any place and any time. This technology has been said can solve many problems of the healthcare system such as increase the storage capacity and add new capability on the existing healthcare system. Cloud computing offers cost effective, increase interoperability and accessibility, optimize resources and integrate the healthcare information systems. It becomes a solution for solving the current issues, which lead to enhance functionality and features of the healthcare information systems. Therefore, the aim of this study is to explore the cloud computing technology as solution for healthcare information system issues. Issues such as data transmission, data storage, cost and maintenance issues are presented and described. The implications of this study then discussed.

**2) Cloud Computing in Healthcare: A Space of Opportunities and Challenges**

**AUTHORS:**  HUCÍKOVÁ, Anežka, and Ankica Babic

As the costs of healthcare services rise and healthcare professionals are becoming scarce and hard to find, it is imminent that healthcare organizations consider adopting health information technology (HIT) systems. HIT allows health organizations to streamline many of their processes and provide services in a more efficient and cost-effective manner. The latest technological trends such as Cloud Computing (CC) provide a strong infrastructure and offer a true enabler for HIT services over the Internet. This can be achieved on a pay-as-you-use model of the “e-Health Cloud” to help the healthcare industry cope with current and future demands yet keeping their costs to a minimum. Despite its great potential, HIT as a CC model has not been addressed extensively in the literature. There are no apparent frameworks which clearly encompass all viable schemes and interrelationships between HIT and CC. Therefore, analyzing and comparing the effectiveness of such schemes is important. In this paper we introduce the concept of “e-Health Cloud” highlighting many of its constituents and proposing building an e-health environment and elucidating many of the challenges confronting the success of the e-Health Cloud. We will also discuss different possible solutions to address challenges such as security and privacy.

**3) A descriptive literature review and classification of cloud computing research**

**AUTHORS:**  Yang, Haibo, and Mary Tate

We present a descriptive literature review and classification scheme for cloud computing research. This includes 205 refereed journal articles published since the inception of cloud computing research. The articles are classified based on a scheme that consists of four main categories: technological issues, business issues, domains and applications, and conceptualizing cloud computing. The results show that although current research is still skewed towards technological issues, new research themes regarding social and organizational implications are emerging. This review provides a reference source and classification scheme for IS researchers interested in cloud computing, and to indicate under-researched areas as well as future directions.

**4) Addressing cloud computing security issues**

**AUTHORS:**  Zissis, Dimitrios, and Dimitrios Lekkas

The recent emergence of cloud computing has drastically altered everyone’s perception of infrastructure architectures, software delivery and development models. Projecting as an evolutionary step, following the transition from mainframe computers to client/server deployment models, cloud computing encompasses elements from grid computing, utility computing and autonomic computing, into an innovative deployment architecture. This rapid transition towards the clouds, has fuelled concerns on a critical issue for the success of information systems, communication and information security. From a security perspective, a number of unchartered risks and challenges have been introduced from this relocation to the clouds, deteriorating much of the effectiveness of traditional protection mechanisms. As a result the aim of this paper is twofold; firstly to evaluate cloud security by identifying unique security requirements and secondly to attempt to present a viable solution that eliminates these potential threats. This paper proposes introducing a Trusted Third Party, tasked with assuring specific security characteristics within a cloud environment. The proposed solution calls upon cryptography, specifically Public Key Infrastructure operating in concert with SSO and LDAP, to ensure the authentication, integrity and confidentiality of involved data and communications. The solution, presents a horizontal level of service, available to all implicated entities, that realizes a security mesh, within which essential trust is maintained.

**5) Impact of Cloud Computing on Health Care**

**AUTHORS:**  Nigam, Vaibhav Kamal, and Shubham Bhatia

The term “Cloud Computing” is a recent buzzword in the IT world and has been a major topic of conversation as of late and is emerging as one of the most important technologies of this decade. Large technology companies are already investing millions of dollars in building infrastructure, services and applications to make cloud computing easily accessible to consumers, organizations and businesses. It remains to be seen how cloud computing will impact the healthcare business since it is very diverse and complex, it presents several challenges such as protecting members health records in addition to following HIPAA guidelines set by federal compliance regulations Efforts are being made to decrease the costs for consumers and it will play a big role in achieving it and also improving clinical and quality outcomes for patients. It will be very interesting to see how cloud computing will address and contribute towards these issues in the healthcare industry. Cloud computing field has an immense potential in it to be used in the field of healthcare especially developing countries like India. This article will discuss briefly on the inception of cloud computing and what it exactly is. Key Words: Cloud, Cloud Computing, HealthCare, Electronic Records, Security, Mobile Health, HIPAA