A REVIEW PAPER ON USE OF IOT IN HEALTH SECTOR

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ABSTRACT

When a health system uses the Internet and other associated networks, this is referred to as e-health. In this work, we looked at research analyse the use of intelligent approaches and their development, especially the inclusion of IoT devices and cloud computing. E-Health is described as "the capacity to search, obtain, comprehend and evaluate information about health from e-sources and knowledge obtained in order to correctly resolve or manage health issues. The Internet, as a storehouse for health information and e-Health analysis, can safeguard consumers from damage and enable them to fully engage in informed health-related decision-making. More critically, high degrees of integration with e-health decrease the danger of erroneous Internet data. Different study approaches linked to security and privacy within IoT-cloud e-health systems with a focus on the potential, advantages and problems of implementing such systems are being investigated. A potential future trend is the merger of IoT-based e-health systems combined with smart systems like cloud computing, which give a smart goal and applications.

KEYWORDS: IOT, Health System, Monitoring, Cloud

INTRODUCTION

Technological advances have permitted the implementation of innovative solutions to improve the quality of human existence. Researchers investigating technological developments have found and assessed health information from various sources in order to gather knowledge and tackle health issues. The development of integrated healthcare technology thus has the potential to improve efficiency and patient outcomes at all levels of the health care system. The development of new application systems for electronic health (e-Health) may address some challenges via effective patient security measures, omnipresent data access, remote hospital monitoring, instant health-care interventions and the decentralisation of electronic records. These systems may handle patient information and data, improve patient quality of life, strengthen cooperation, improve patient outcomes, reduce costs and raise the efficiency of e-health services overall.

Moreover, Eysenbach describes e-Health as a high-tech sector which symbolises the confluence of the Internet, networking and healthcare and benefits consumers and stakeholders of the system. Electronic health is an emerging area at the convergence of medical information technology, public health and internet health services, which embrace and drive global new technology development in order to tackle deep-rooted issues, reduce costs and enhance patient care. Thus, IoT-connected models, gadgets and systems are all-round. Moreover, extensive IoT acceptance has coincided with the development of connected communications technologies, such as healthcare computing, business, the industry, operating systems, etc. The effective and secure deployment of health information technology, services and comprehensive e-health systems demands very efficient and strong safety procedures in order to make this application sustainable. The ubiquity of IoT systems has encouraged IoT technology research and development, including several designs for usage by health networks. The link between networks, devices, apps and IoT services enables e-Health systems to communicate information utilising state-of-the-art technologies.

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However, as new cloud computing technologies continue to go beyond the status quo, numerous security concerns to information sent or stored must be taken into consideration. Pasha and Shah have established a framework for IoT-based e-health systems that focuses on interoperability, various technological standards, communication protocols and system needs when it comes to designing them. Web technology, communications protocols and hardware design were used in applicable protocols and standards. Their structure was shown safe by the use of trust tests that revealed that there was simultaneous interoperability across multiple IoT devices, standards and protocols in an e-health system. suggested the notion of Fog computing as a smart e-health system in a healthcare IoT system to construct a distributed intermediate intelligence layer between sensor nodes and the cloud. They used the ubiquity of current healthcare systems in order to reduce the pressure on sensors, networks and distant healthcare centres, therefore tackling mobility, energy efficiency, scalability and reliability problems. The effective implementation of their e-health systems is a UT-Gate that has higher-level characteristics such as an early warning system based on IoT, which offers improved overall system intelligence, efficiency, performance, interoperability, security and reliability. . have devised a system that integrates smart IoT devices to provide internet access using cloud computing. By enabling the capture and collection of data required to monitor the health of the patient, doctors might better treat their health issues in a timely manner. Islam et al. devised a four-step architecture for e-health systems consisting of devices, data collection and processing, data storage and data analysis, using cloud computing. They outlined applications in which the system is beneficial, related technologies needed to operate and the advantages and drawbacks associated with it.. introduced IoT-based body sensor network technology using IoT-integrated lightweight wireless sensor nodes to transmit and receive data via cloud computing. They look at privacy and safety standards to safeguard the healthcare system and to guarantee that patient data is kept secret. Selvaraj et al. examined and identified significant difficulties, possibilities and constraints on the increasing integration of IoT devices and cloud computing

into e-health systems. They noted that authentication is essential to security of the IoT cloud based e-health system and developed an authentication strategy to provide improved performance and convenience protocols for IoT cloud-based e-Heath systems. Kaur et al. sum up the benefits of cloud hosting services and found that IoT-cloud-based apps provide startups with high value via increased flexibility, expansion and cost reduction due to pay-per-use structure.

CONCLUSION

Implementation of the IoT-cloud-based e-health system is extremely changeable and may be adjusted to the demands of particular e-health system providers. Therefore, e-Health providers provide many sorts of IoT and cloud computing services, such as ongoing monitoring, preventative treatment, patient satisfaction monitoring, and AI-driven diagnostics. Each of these services is a possible privacy leak that has to be taken into account when establishing privacy protections inside a specific system. End consumers have been more careful about the privacy of their medical data than ever. For instance, if patients with an embarrassing health condition have leaked or spread their confidential information in social media, it would be difficult to maintain their trust in the healthcare provider without mentioning extremely difficult for the provider to correct the situation as stated in this article . offered IoT to healthcare via the use of mobile computing impacts. They have employed a systemic literature review process and shown how mobile computing may help IoT healthcare applications. The IoT may provide privacy and security in IoT devices for health care. Similarly, the modern technique used was studied based on a systematic literature search to study privacy via in-depth design frames focused at the healthcare sector and to identify important healthcare limits. They suggest its feasibility for future healthcare research and development guidelines. Wu et al. created a mobile health model for IoT in social networks. The model is deployed to a social network that users may utilise the model for diagnosis and treatment through APP in IoT. The model may alter the control variable and give hospitals with the most efficient control. Khatoon et al. submitted a hospital IoT application survey. IoT for healthcare services may improve patients' dependability and quality. The IoT in healthcare comprises of intelligent devices which are sensor-enabled and properly process data.

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