

Big Data Analysis for Smart Health Care System

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There are many health issues in the world today, with a wide population of all groups of individuals. The intelligent health care system is therefore an important element in the development of an intelligent community. Only then does the network help and maintain all the records and data of this crowd, a smart healthcare system can be named. The modernisation of healthcare procedures and facilities has increased tremendously in recent years. Today, applications may provide direct access to a past health record of a patient that enables medical staff to track and discuss patients remotely. All of these activities have led to a large number of data being generated, and the analysis of these data is very important. These data can be used to diagnose symptomatic-based patient diseases and to analyse health patterns in past years and history. Therefore, it is extremely important to store, exchange and process such large and complicated data, but at the same time it can be extremely difficult and inefficient. This is why large-scale analysis and smart techniques are used for the very effective management of those results.

Keywords

Smart healthcare system; big data; artificial intelligence (AI); internet of things (IoT).

Proper data management helps to study and explore more advanced treatment options to extend the smart healthcare diagnostics area. Big data analytics tools such as business intelligence, database, and cloud computing have enabled storage and management. A patient's history of health and personal data collected by a doctor is often available to the insurance provider and to other hospitals. Cloud computing enables this opportunity to share data. Several devices are connected to one storage platform in the cloud network and can share data. The usability of data has naturally increased. Some of the main advantages of the cloud is the ability to exchange data on different levels. Many organizations can share data or it can be limited to one entity. The level of knowledge sharing has improved data security. In order and logical way, databases and business intelligence have helped to store data. Business intelligence provides a variety of useful functions, such as web analysis, monitoring, data mining and complex event processing. The zettabytes of data were handled across all of these apps. Another area that led to intelligent healthcare was IoT (Internet of Things). The quality of healthcare has been improved with IoT systems used for blood pressure management, oxygen tanks and other systems (such as screening equipment and automatic nebulizers).

While the system improves every day, several problems remain, including data changes, and it is both necessary and crucial to replace the old data with new information. Such problems can be resolved in future if, by applying Big Data principles to IoT concepts, machine language and deep computing, the healthcare sector is completely automated.

Artificial Intelligence (AI) involves using computers to do things that traditionally require human intelligence. This means creating algorithms to classify, analyze, and draw predictions from data. It also involves acting on data, learning from new data, and improving over time.

Artificial Intelligence (AI) is the branch of computer sciences that emphasizes the development of intelligence machines, thinking and working like humans. For example, speech recognition, problem-solving, learning and planning.

Biography

Dr. Souvik Ganguli is presently working as the Assistant Professor in the Department of Electrical and Instrumentation Engineering, Thapar Institute of Engineering and Technology, Patiala. He has pursued B. Tech (Electrical Engineering) and M. Tech (Mechatronics) in the years 2002 and 2008 respectively. He has completed his PhD degree in system identification and control from Thapar Institute of Engineering and Technology in October 2019. He has a total of 16 years of work experience in industry, teaching and research. His research interests include model order reduction, identification and control, nature inspired metaheuristic algorithms, electronic devices and renewable energy applications. He has nearly 75 publications that have been cited over 100 times, and his publication H-index is 6 and has been serving as a reviewer of several reputed journals