Chapter 15
Patient Monitoring System Using Internet of Things

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ABSTRACT

IoT comprises billions of devices that can sense, communicate, compute, and potentially actuate. The data generated by the IoTs are valuable and have the potential to drive innovative and novel applications. IoT allows people and things to be connected anytime, anyplace and to anyone with the internet using tiny sensor. One of the best advantages of the IoT is the increasing number of low-cost sensors available along with its functionalities. A few standard sensors include linear accelerator, compass, light sensors, camera, and microphone, moisture, location, heart rate, and heart rate variability. The trend is multi-sensor platforms that incorporate several sensing elements. In such environment, discovering, identifying, connecting, and configuring sensor hardware are critical issues. The cloud-based IoT platforms can retrieve data from sensors IoT is an inter-disciplinary technology, encompassing multiple areas such as RTS, embedded systems. This chapter detailed investigation and presents highly innovative and revolutionary ideas in healthcare application are available.

INTRODUCTION

In the very recent to our regular lives, we are habituated and focusing to show some interest in wearable sensors. They are become a part of today's generation. Devices are integrated with human in many aspects to evaluate their health and economic zones. Our main aspect to project the objectives of the Internet of Things and its devices and note the challenges when we are monitoring a patient. The key factors are generated based up on the end user requirements which lead to provide the things as in an enhanced way to achieve the commerciality, availability and flexibilities. Till now there are several devices are ready to provide the services, generating good results and commercially available for personal health care in hospitals, fitness care as gyms, and activity awareness. How they are serving well than a human? The achievements will include lots of complexities to predict the data which is generated with the help of electronic devices. The data which is belongs to health care is accepted as sets of data. The data is individual to person. Production of data is very large due to number of devices are increased in the real world. it is very complex to represent the specific analysis to serve a particular patient. Even it is complex to manage the data with traditional systems or tools. With the help of data Analytics, our job becomes very easy to predict the level of disease, amount of medicine needs to use and able to provide the best friendly services to patient. Now, what is this data analytics? What is the importance for it? Why analysis is required? This Chapter will focus to reveal everything about it.

Importance of Data Analytics in Health Care System

In the software evaluation was started new era in the computer world to make everything as end user centric. The world is more over waiting for features as need of high flexibility, to provide the distributed mechanism, high end availability and user-friendly environments to client. With the help of high-level programming language and developers have start generating 4th generation languages such are helpful to accessing the databases. When we started providing the distributed mechanism to end user, they are expecting high availability of applications. Now industrial Revolution has been (Samir et al.,2016) supporting for even small-scale industries also start providing features in 24*7 manners to fulfill the business requirements as banking, health, finance, commerce and commercial fields. Everything is on finger tips, end user centric applications are grown very fast. Now end user has flexible and high available approaches around in the real world. Usability is also speeded up. It's a good omen for new a business enterprise. While serving an end user when there is a Hugh amount of data is going to be generated. Here, we had resources to store this data like databases. New challenges are produced and questioning new enterprise about speed, gathering exact information, extraction of useful data. This becomes to a new invention which is going to lead the business world. Improvising Data algorithms are introduced to extraction the data from databases. It is providing responsibilities for a Data Analytics to enhancement in the data retrievals, report generation and market analysis or on business requirements. Data Analytics has a key role. It's showing some improvisation and representation for the unstructured data and resolving the real-world problems. The data analytics are going to divide this challenge into two stages. They are Data acquisition and data analysis.

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