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Internet of Things

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ABSTRACT

The internet of things, or IOT, is systems that are provided the ability to transfer data over a network without requiring human-to-human or human-to-computer interaction. Organizations in a variety of industries are using IOT to enhanced customer service. The Internet of things (IOT) describes physical objects (or groups of such objects) that are embedded with sensors and other technologies that connect and exchange data with other devices and systems over the Internet or other communications networks. The extensive set of applications for IOT devices is often divided into consumer, commercial, industrial, and infrastructure spaces. The internet of things helps people live and work smarter, as well as gain complete control over their lives. In addition to offering smart devices to automate homes, IOT is essential to business.

Some of the advantages of IOT include ability to access information from anywhere at any time on any device. Its improved communication between connected electronic devices. Some disadvantages of IOT include the following as the number of connected devices increases and more information is shared between devices, the potential that a hacker could steal confidential information also increases. If there's a bug in the system, it's likely that every connected device will become corrupted.

In conclusion, Internet of Things is the concept in which the virtual world of information technology connected to the real world of things. The technologies of Internet of things such as RFID and Sensor make our life become better and more comfortable.

Introduction

The Internet of Things (IOT) is an emerging paradigm that enables the communication between electronic devices and sensors through the internet in order to facilitate our lives. IOT use smart devices and internet to provide innovative solutions to various challenges and issues related to various business governmental and public/private industries across the world. IOT is progressively becoming an important aspect of our life that can be sensed everywhere around us.

Importance of IOT

internet of Things helps people live and work smarter, as well as gain complete control over their lives. In addition to offering smart devices to automate homes, IOT is essential to business. IOT provides businesses with a real-time look into how their systems really work, delivering insights into everything from the performance of machines to supply chain and logistic operations. IOT enables companies to automate processes and reduce labor costs.

Applications of IOT

IOT is completely devoted to provide emerging public and financial benefits and development to the society and people. This includes a wide range of public facilities i.e. economic development, water quality maintenance, well-being, industrialization etc. Overall, IOT is working hard to accomplish the social, health and economic goals.

Smart city, transport and vehicles

IOT is transforming the traditional civil structure of the society into high tech structure with concept of smart city, smart home and smart vehicles and transport.

Agriculture and industry automation

The world's growing population is estimated to reach approximate 10 billion by 2050. Agriculture plays an important role in our lives. In order to feed such massive population, we need to advance the current agricultural approaches. So that production can be improved in an efficient

Issues and Challenges of IOT

Security and privacy issues: -

One of the most important and challenging issues in the IOT is the security and privacy due to several threats, cyber-attacks, risks and vulnerabilities.

Ethics, law and regulatory rights

With the development of IOT, several real-life problems are solved but it has also given rise to critical ethical and legal challenges. Data security, privacy protection, trusts and safety, data usability is some of those challenges.

Scalability, availability and reliability

The main issue with IOT is to support a large number of devices with different memory, processing, storage power and bandwidth.

Quality of Service (QoS)

Quality of Service (QoS) is another important factor for IOT. QoS can be defined as a measure to evaluate the quality, efficiency and performance of IOT devices, systems and architecture

Conclusion

Recent advancements in IOT have drawn attention of researchers and developers worldwide. IOT developers and researchers are working together to extend the technology on large scale and to benefit the society to the highest possible level. However, improvements are possible only if we consider the various issues and shortcomings in the present technical approaches.

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