Internet Of Things

Introduction

Technology is playing a major role in our lives. The advent of different types of technologies has changed the way we live and work. The discovery of computers and the internet has brought a revolutionary change in the world. People at present mostly depend upon the internet and computer to perform their maximum tasks. Not only has it changed our lifestyle but also made it comfortable. The Internet of things is also an aspect of the internet.

What is meant by the Internet of Things (IoT)?

IoT refers to the collection of different types of daily life appliances and gadgets used in different sectors that are broadening the aspect of the internet. The connectivity with the internet enables these devices to share and receive data with different objects. Internet of things simply means the network of devices that

are able to share and receive data and information with other devices via using the internet.

The things or objects in the Internet of Things above are well equipped with sensors, software, and machine learning techniques. The use of such objects reduces human interference in doing any of the work.

IoT Architecture

The objects in the Internet of Things have a definite constitution of technologies that enables them to work efficiently by using an internet connection. These devices are architecture that is a combination of several technologies. The technologies that are embedded in IoT are enlisted below:

- **Different Types of Sensors-** IoT devices have sensors embedded in them so that these devices can sense whatever is happening in the environment. It is working in the same way as the human sense organs

are working. The connection of sensors with the internet helps it to collect information from the surroundings.

- **Internet Connection-** An internet connection is a must to enable the sensors in the devices to connect with other devices so that the sending and receiving of data becomes convenient.

- **Several Computing Devices-** These devices help in make the process of data collection, analyzing, and sending more easily.

- **Machine Learning and Analytics Devices-** The use of machine learning and advanced analytics by the Internet of things make this process more efficient. It helps the devices to collect maximum data in very less time.

- **Artificial Intelligence-** Artificial intelligence and machine learning help the devices develop connectivity with other devices in the IoT network smarter. In another way, we can state that it smoothens the process and helps in reducing human interference in performing any kind of task. Example: Alexa, Siri, etc.

Advantages

- IoT devices help in establishing interaction between the devices connected with each other through the internet.
- The sensor embedded in the smart devices makes it capable of collecting and accessing different information at any time.
- The collected data can be analyzed and further brought into action or shared with

other devices in very less time. This reduces the effort and time taken to do the same work by people manually.

Disadvantages

- There are many devices connected with each other in IoT and thus sharing of different information takes place. The probability of hacking some important information increases in such processes.
- The enterprises concerned with different businesses can acquire information from several devices connected to the IoT networks. It is difficult for them to collect and manage data from a large number of IoT devices.
- Every smart device does not have compatibility for connecting with other

devices as there is no international standard for IoT.

Conclusion

The Internet of things has widened the aspect of the internet. This has become the most discussed topic at present. These smart devices influence our life in our travel, shopping, lifestyle, health, daily work, etc. The Internet if things is not only restricted to household objects but they have wide applications in different sectors. In this way Internet of Things is having a positive impact on society.