Essay about internet of things

Technology, Internet

IoT Technology

This is a critical evaluation and summary of a talk about the Internet of Things (IoT) on Tedx Talk on May 21, 2016. It is a presentation by Jordan Duffy a Tech Demo winner and an information technology guru. Jordan Duffy defines internet of things as a system comprising of different devices and objects that are interconnected for interaction. The system is made up of computer devices, objects, human beings, animals, digital, and mechanical machines that are fixed with a unique device that identifies and assist in the transmission or transfer of data over the network without any assistance from humans such as an interaction between the humans and the computers or any human to human interaction. The IoT are connected to the internet. They present technology that will assist in the interaction between digital items and physical objects.

There are four primary objects that are vital to the functionality of IoT. Namely; data, hardware, software, and connectivity. Hardware items connect digital item to physical items. Data is the information that creates meaning out of the IoT. With the advancement of technology, data is becoming a universal language of things, and it becomes leaner and leaner with the advancement in technology. Softwares are used to analyze the data. Softwares include Facebook and Twitter. They interpret data and make meaning out of the communication. It creates meaning out of the data from the hardware and does things that are valuable to human beings. Connectivity is a system that connects the hardware to the software. It facilitates the transfer of information between the devices. It has grown from

Ethernet, Wifi, 2G, 3G, and 4G. It grows cheaper and faster with the advancement of technology (TEDx Talks, 2016).

The IoT is used as a proximity marker and identifier. It enables conversation in the form of data, which is a universal language. The technology has been applied in Bluetooth, air quality sensors, galvanized skin responsive system, and so forth. The IoT systems are in use everywhere starting from our homes to our offices (TEDx Talks, 2016). It presents opportunities that will take the world to the next level over the coming decades through the IoT connectivity.

IoT Devices

Any device that has the capability to transfer data over a network is the reference term “ Thing” in the statement Internet of Things. Such devices include the mobile phones, sensors, and the smart watches that we wear. The services of IoT are immense and cannot be brought down by any attempt. It is a very big industry. For example, in 2013 there was an online attempt to hack into the system and bombard it with traffic from many sources to have it crash. This was referred to as the distributed denial of service (DDOS) attack. As a result of the attack, services offered by various platforms such as Twitter, Github, Airbnb, Reddit, Etsy among others were put in distress because their servers had been overwhelmed by IoT services that had been hacked.

Despite the attempts to knock down the IoT devices, they cannot be driven out of the market. They have become a critical item in the industry, and they are relied upon by almost every form of life and services in use. Thus, IoT

has become very big. To prove it, IoT devices that have been connected to the internet were about 10 billion devices by the year 2015. However, the connection is expected to rise by 24 billion to 34 billion connections by 2020. This is in contrast to the traditional connections from computer devices such as the smartwatches, smartphones, and the tablets which will approximately account for 10 billion connections by the same year. Expenditure on IoT solution will be about $6 trillion by the year 2020 (TEDx Talks, 2016). This is remarkable, and it indicates the critical role that IoT solution is playing in the society to create such a huge demand from its users.

IoT is also critical to the development of smart cities. However, the subject is controversial due to the infringement of people's privacy. Nevertheless, when it comes to the development of the smart cities, IoT solution will come in handy to support the infrastructure. It will be vital especially in the collection of information among the city dwellers and users. The data and information collected would be privatized to protect the public from danger. The IoT will be vital in collecting information relating to public infrastructures such as parking areas, streets, and the use of sidewalks. The IoT devices will achieve the above role by monitoring the city users. It is necessary that cities come up with rules and guidelines on how IoT will monitor the public in the cities to avoid any breach of privacy and basic human rights of the city dwellers. The rules and guideline in respect to IoT should relate to infrastructure, privacy and transparency, operations and sustainability, data management and security(Xia, Yang, Wang and Vinel, 2012).

The IoT technology is very vital for us. It applies to every aspect of our lives through IoT connectivity. It will have an impact on security, health sectors, factories, work sites, humans, offices, and so forth. Barcelona smart city is one of the examples of a place where IoT technology have improved the standard of living and reduced the costs of operations(Duffy, 2015). The technology will enable people to concentrate on invention, creativity, and humanity after most of all the things we do every day are automated through IoT.

Bibliography

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