

Internet of Things for Smart City

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Abstract

The new Internet of Things (IoT) applications enabling Smart City initiatives is interesting. It provides the ability to remotely monitor, manage and control devices which will give better aspect for city with help of IoT. It will provide new insights and actionable information from the real time data collected by the sensors. The main motive of the Smart City is to fulfil the new demand on cities, by using the new demands to provide the better living. The potential is there for the IoT to improve many aspect of living. The different applications provided by IoT for smart city which will give better services, reduce cost, improve interaction.

Keywords: *IoT, Smart city, Sensor, Aspects.*

INTRODUCTION

The Smart City focuses on different aspects of the living. By using different sensors that will be used to collect the data from different resources and use the data in correct way that will provide different solutions for improving the way of living. It will contains different sectors as smart parking, street light automation, noise pollution, fire detection system, water level monitor, temperature and humidity, air quality.

It will focus many aspects of city. It will be new way to define the how it will be improved in different cities. The different aspect which will be focused it will be common areas that will need the improvement. By using IoT it will made more interesting. The areas will be focusing it will be need to be improved. Hence the different areas will be considered.

The areas on which focus will be given is one of the parking system. It is mainly

focus on the traffic congestion will be done in the different cities. The parking system will be provided in the cities to park the cars. The idea is to provide the better way to park the different vehicles in different parking slots in the better way using the information of getting which parking slots will be empty and which are full.

The next is light management. The lights will be provided which will be used to provide light in especially night. But if sometime it will be on as if the night will be over. Let make it automatic means the sensor will measure the intensity of light from the surrounding. The intensity of light in one city will be same which will give make simpler to use the sensor which will give it. It will help to reduce the light will be using.

The different aspects will be used as air quality which will be used to measure the different pollutants in the air. By using the data it will be easy to do different solutions for it. The pollutants will be dangerous for the peoples living in the city. Hence it will be possible to provide the ways to reduce it. It has limitations but it will be useful for the city.

The one of the main aspect is waste management which is focused. The waste collected by the city which is in the huge amount. It will be essential to collect it the regular fashion and it will be recycled. It will be important because of it is related to the health issue of the peoples around the city lived and in city lived also. Hence it will be collected and recycled. The different locations will be given dustbins, by using the levels of dustbin provide the information that is it is full or not. By using this it will give the information that it will be made to be empty.

Fire detection system will provide protection from fire. It will detect the fire and give alert information when fire is occurred. It will provide information such as fire, no fire. Water level system will give the level of water present in the water tank. It will give the level of the water and provide the information when to start the motor to fill the water in the tank.

RESEARCH ELABORATIONS

The lists of the problems faced by Indian cities are many. The different problems will be faced by the cities will be inefficient facilities, services will not sufficient to be used, ignored sections. The many of the areas will not give attention which will be important to be focused. The

many aspects will make serious impact on the city. The India will be continues to lag behind in many aspects which will be improved in all over world. Hence many aspects will need to be improved to make the development. The facilities will be provided will be poor. It will fail to give the services to the peoples.

RESULTS

The proposed system consist of different modules it contains smart parking, street light automation, noise pollution, fire detection system, water level monitor, temperature and humidity, air quality. The different modules will be provided in this to make a city to be Smart city.

The different modules will be providing different applications but together it will make one Smart city which will be implemented by using IoT and different sensors. The sensors will be used for collecting the data and it will be provide a different application for the whole city. The proposed system will gives how to use many resources in efficient manner.

The IoT will be Internet of Things which will be collect data from different sensors and transfer it using the internet. The data will be useful for the different organizations will be using it. In the Smart

city were many sensors will be used is ultrasonic, LDR, water detector, flame, DHT11, air quality, sound sensor.

The different sensors will be used as mentioned above. The sensors will collect the data and it will used in the city. The sensor has different use as it will be used in the Smart city. Ultrasonic sensor is used to detect the presence of the space for the different parking slots. It will provide distance measurement by using this we will get the information which will be how many parking slots will be full or not.

The Light Sensor is used for indicating the intensity of light. By using this we will be easy to manage the lights on street. It will provide the intensity of light by using it will provide light will be on or off. Water detector sensor is used to detect the presence of water. It will provide alert in time to prevent the damage of water also it will detects the level of water by using this we will manage the water for days.

Flame sensor is used to detect flame in surrounding area. It will protect from flame in surrounding area. It provide alert when flame is detected. DHT11 sensor detects the temperature and humidity from the surrounded area. It will provide high reliability. Air quality sensor will provide

the pollution in the surrounding area. It will help to find solution for it. Sound sensor is used to detect the noise pollution in the area. It will help to make the different measures to it.

CONCLUSION

We analyzed solutions for the development of cities. The different aspects will be taken into consideration then we will analyze the solution using IoT. For implementation of IoT we will need the whole knowledge of IoT and how it will be used and implemented. By taken into consideration of different IoT services we will be able to do it. Having the realization of IoT services and solutions will be widely used. The different implementation techniques will be studied for use. The practical realization of IoT will take into consideration. There are more design options will present the choose one of them.

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