Role of IoT in Automotive Industries

❖ Fleet Management

❖ Connected Cars

❖ Automotive Maintenance

❖ Autonomous Vehicle

❖ In-vehicle Infotainment and Telematics

FLEET MANAGEMENT

➢ A fleet operator can easily go through this information to monitor different

parameters associated with its fleet. Some of the benefits that an IoT infused fleet

management system offer to a fleet manager are:

❖ Real-time location monitoring of the fleet

❖ Weight/Volume tracking of cargo that the fleet is carrying

❖ Trucks' performance statistics like fuel and mileage

❖ Tracking traffic conditions on the road

❖ Route management

❖ Time and Driver management

CONNECTED CARS

➤ Connected cars facilitate fast transmission of data and increase drivers' response time through enhanced vehicle communication. Based on the vehicle's connection with different objects, the CV2X is sub-divided into four categories:

❖ Vehicle to Vehicle

❖ Vehicle to Infrastructure

❖ Vehicle to Pedestrian

❖ Vehicle to Network

AUTOMOTIVE MAINTENANCE

❖ IoT automotive maintenance system also helps a person to take necessary steps to prevent its car parts from sudden breakdown.

❖ Just like dashboard indicators of a vehicle, this system alerts the driver about probable malfunctions.

❖ However, the alerts are sent to the driver's mobile, way before the problem even occurs.

❖ This helps the driver to make cost-effective and time-saving steps to avoid component failure while driving.

❖ The capabilities of predictive maintenance can be implemented to an individual vehicle as well as to a fleet.

AUTONOMOUS VEHICLE

❖ IoT infused semi-autonomous cars take on-spot decisions while partly controlling the vehicle operations to avoid accidents and reduce the load from the driver.

❖ Along with different proximity sensors and cameras, cars are integrated with IoT systems to reduce human error and make driving more comfortable and safe.

IN-VEHICLE INFOTAINMENT AND TELEMATICS

❖ Through a smartphone-enabled dashboard, car owners can be ensured about its security, surveillance, and safety at all times.

❖ External sensors and cameras keep a track of the vehicles' condition and send the data to a mobile application.

❖ Telematics system along with real-time alert system sounds an alarm in the owner's smartphone if someone tries to forcefully enter the vehicle without proper access.

❖ The smart car enabled with IoT also calls concerned authorities immediately like ambulance or firefighters in case of an emergency.

1. Mention the role of IoT in Automotive Industry?

2. Is it possible to use the IoT device safer in Automotive Aspects?

REFERENCE

❖ https://www.webnms.com/iot/help/iot_deployment_guide_cloudgate/iot,

_sensors,_and_cloud_server.html