MUTHAYAMMAL ENGINEERING COLLEGE

An Autonomous Institution,
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IBM (Nalaiya Thiran) Project Ideas 2022

SHEKMUSARAF (MECR19EC093)

1) **Smart and Intelligent Home Automation with Customized Settings:**

   Description:
   Internet of Things (IoT) allows us to implement home automation system that can be controlled remotely through internet. The proposed system can monitor different Page 7 of 12 parameters like gas, light, motion detection, temperature, etc. using the sensor data and also trigger a process according to the requirement. The data from the sensors are uploaded to a cloud server and this data can be used to analyze the parameters.

2) **Development of Smart System for Women Safety**

   Description:
   Today in the current global scenario, the prime question in every girl's mind, considering the ever rising increase of issues on women harassment in recent past is mostly about her safety and security. The aim of this theme is to develop a device which is the integration of multiple devices, hardware comprises of a wearable “Gadget” which continuously monitor the scenarios around the girl and stream the data whenever there is a need.

3) **Development Smart System for the Remote Health Monitoring of Elderly Patients**

Description:

In a world with an accelerated population aging, there is an increasingly interest in developing solutions for the elderly living assistance. The Internet of Things is a new reality that is completely changing our everyday life and promises to revolutionize modern healthcare by enabling a more personalized, preventive and collaborative form of care. Aiming to combine these two important topics, this problem statement presents an IoT-ready solution for the elderly living assistance which is able to monitor and register patient's vital information as well as to provide mechanisms to trigger alarms in emergency situations.

4) **Smart System for Hazardous Gas Detection**

Description:

The core objective of the Smart City mission is to develop the clean and sustainable solution that helps to improve the quality of the living environment. No city can be smart without the smart sewage management system. Sewer gas is a complex mixture of toxic and nontoxic gases produced and collected in sewage systems by the decomposition of organic household or industrial wastes, typical components of sewage. High concentrations of hydrogen sulfide (>150 ppm) can produce olfactory fatigue, whereby the scent becomes undetectable. At higher concentrations (>300 ppm), hydrogen sulfide can cause loss of consciousness and death. Very high concentrations (>1000 ppm) can result in immediate collapse, occurring after a single breath. In worst cases, it may lead to the collapse of the structure with significant cost for its rehabilitation. The objective of this problem statement is to develop a model to detect the hazardous gas level in remote locations using sensors and send these data to the centralized server to monitor.