



MUTHAYAMMAL ENGINEERING COLLEGE

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IBM (Nalaiya Thiran) Project Ideas 2022

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1. Smart Alarm Clock

This is one of the interesting IoT project ideas. This IoT-based alarm clock functions not only as an alarm clock to wake you up every morning, but it can convert into a fully-functional device capable of performing other tasks as well. The features of this smart alarm clock include:

- Voice command option to execute standard commands and also to initiate a video chat.
- A text-to-speech synthesizer
- Automatic display brightness adjustment
- Audio amplifier volume control
- Alphanumeric screen for displaying text

Apart from these features, you can also add customizable features on the smart alarm clock. Interestingly enough, the alarm clock offers three ways of waking you up – by playing local mp3 files, by playing tunes from the radio station, and by playing the latest news updates as podcasts.

2. Air Pollution Monitoring System

One of the best ideas to start experimenting your hands-on IoT projects for students is working on Air pollution monitoring system. Air pollution is a menace in all parts of the world, and monitoring air pollution levels is a challenge that we're facing. While traditional air pollution monitoring systems fail to monitor air pollution levels successfully and the contaminants, IoT-based air pollution monitoring systems can both monitor the level of air pollution in cities and save the data on web servers for future use.

This smart air pollution monitoring system promotes a cost-efficient technique of determining air quality. The system is embedded with sensors that specially monitor five components of the Environmental Protection Agency's Air Quality Index – ozone, carbon monoxide, sulfur

dioxide, nitrous oxide, and particulate matter. Plus, the system also includes a gas sensor that can alert users in case of gas leaks or the presence of flammable gases. Apart from this, there's also a temperature and humidity sensor.

3. Smart Parking System

With cities and urban areas getting crowded by the minute, finding a parking space is nothing short of a challenge. It is not only time-consuming but also quite frustrating. Thanks to IoT, there's a solution for solving the parking problem crisis. This IoT-based smart parking system is designed to avoid unnecessary travelling and harassment in the search for an appropriate parking area. This is an excellent IoT projects for beginners.

So, if you are at a parking space, this system uses an IR sensor to monitor the entire area during the run time and provide you an image for the same. This allows you to see any free spaces in the parking lot and drive straight to it without wasting any time in looking for a parking space. Also, the system is tuned to open the car gate n only if there are empty slots available in a parking space.

4. Smart Traffic Management System

As the population increases, the number of vehicles plying on the road also increases inevitably. Due to the ever-increasing number of both public and private cars in cities and metropolitan areas, traffic congestion has become an everyday problem. One of the needed and best IoT projects. To combat this problem, this IoT-based project creates a smart traffic management system that can effectively manage traffic on roads, and offer free pathways to emergency vehicles like ambulance and fire trucks.

Emergency vehicles can connect to this smart system and find signals and pathways where the traffic flow can be controlled dynamically. It flashes a green notification light for emergency vehicles. Also, this intelligent traffic management system can identify and monitor traffic violators even at night.