

9512 JP COLLEGE OF ENGINEERING

AIR QUALITY MONITORING SYSTEM

Proj_21193_TEAM_1

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IOT_PHASE:3(Development part 1)

Configure IOT Devices

SENSORS FOR POLLUTION LEVEL

PM SENSORS

The pm is a laser- based sensor that decants and counts particles in a particular environment by using a light scattering technique. A particle is illuminated by a laser light source as it's drawn through the laser beam and is captured on a photo or light detector. The electric signal that is created after the light has been prion allows or processed and translated into the particulate size and amount information allows or real time calculations.



PARTICULAR MATTERS

It has built an in to increase the airflow.

PM sensors are capable of measuring particulate matter in the range of 1 micron or higher. We can program it to measure at various micron levels.



CODING:

```
import time
```

```
import random
```

```
class AirQualitySensor:
```

```
    def __init__(self):
```

```
        # Initialize sensor parameters
```

```
        self.sensor_id = "AQ-123"
```

```
        self.location = "Living Room"
```

```
    def measure_air_quality(self):
```

```
        # Simulate air quality measurement (replace with actual sensor data)
```

```
        pm_concentration = random.uniform(0, 100)
```

```
        return pm_concentration
```

```
class IoTPlatform:
```

```
    def send_data(self, sensor_id, location, data):
```

```
        # Simulate sending data to an IoT platform (replace with actual IoT platform code)
```

```
        print(f"Sending data to IoT platform: Sensor ID - {sensor_id}, Location - {location}, Data - {data}")
```

```
def main():
```

```
    air_quality_sensor = AirQualitySensor()
```

```
    iot_platform = IoTPlatform()
```

```
    try:
```

```
        while True:
```

```
            # Measure air quality
```

```
            pm_concentration = air_quality_sensor.measure_air_quality()
```

```
            # Send data to IoT platform
```

```
lot_platform.send_data(air_quality_sensor.sensor_id, air_quality_sensor.location,  
pm_concentration)
```

```
# Wait for a specified interval (e.g., 1 hour)
```

```
Time.sleep(3600)
```

```
Except KeyboardInterrupt:
```

```
Print("Monitoring stopped.")
```

```
If __name__ == "__main__":
```

```
Main()
```