III - Year

AIR QULAITY MONITORING

Using IOT

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Abstract:

The project involves setting up IOT devices to measure air quality parameters and make the data publicly available for raising awareness about air quality and its impact on public health. The objective is to create a platform that provides real-time air quality information to the public. This project includes defining objectives, designing the IOT monitoring system, developing the data-sharing platform, and integrating them using IOT technology and Python.

Design Thinking:

1).Project Objectives:

Certainly, when defining project objectives for an air quality monitoring project,Air is most important.

Environmental impact assessment:

Evaluating the impact of air pollution on ecosystems, wildlife, and vegetation.

Early warning system:

Developing an early warning system to alert authorities and the public to potential air quality emergencies.

2).IoT Device Design:

Designing Internet of Things (IOT) devices for air quality monitoring involves several key considerations to ensure accurate and reliable data collection.

Data storage:

Include onboard storage or cloud integration for storing historical data. Cloud platforms like AWS, Azure, or Google Cloud offer scalable solutions for data storage and analysis.

GPS(Optional):

Incorporate GPS to provide location data, allowing for geospatial analysis and mapping of air quality.

3).Data sharing platform:

Creating a data sharing platform for air quality information is essential for transparency, collaboration, and informed decision-making.

Data Archive:

Maintain an archive of historical air quality data for research and long-term trend analysis.

Public Engagement:

Promote the platform to raise public awareness of air quality issues and encourage citizen engagement.

4).Integration Approach:

Integrating air quality monitoring systems involves connecting various components and data sources to create a comprehensive and coherent system.

Documentation and Training:

Provide documentation for users and developers on how to use the integrated systems. Offer training if data necessary.

Compliances & Security:

Adhere to relevant data privacy regulations and security best practices when sharing and integrating data.