

TECH SPARK 2.0



AIR QUALITY MONITORING AND CONTROLLING REAL TIME THROUGHOUT THE CITY

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Abstract:

This project introduces an IOT-based air quality monitoring system designed for urban environments. The system integrates a network of strategically placed sensors, encompassing particulate matter, gas, temperature, humidity, and dust sensors across the city. Data acquired by these sensors undergoes transmission to a centralized cloud platform for comprehensive analysis. Through the system's capabilities, identification of pollution hotspots becomes feasible, thus enabling timely interventions through an alerting mechanism that promptly notifies both relevant authorities and the public of critical pollution levels. Furthermore, the system's capacity allows for the precise identification of pollutant types, including Sulphur, Carbon Monoxide, heavy metals, dust particulates, and others, thereby facilitating targeted solutions tailored to the specific pollution types prevalent in distinct areas. To ensure widespread access, the project incorporates user-friendly interfaces, such as mobile applications, offering real-time air quality information to encourage community involvement in environmental preservation efforts. Overall, this system endeavors to promote well-informed decision-making, focused pollution management strategies, and sustainable urban development, all contributing to enhanced public health and overall well-being.

