

Air Things

Monitoring and air quality



Summary

The AirThings solution provides an end-to-end, power-independent air quality monitoring system, ensuring reliable data collection, analysis, and presentation for larger cities in the Balkans. By enabling various stakeholders, including government institutions and the general public, to access and utilize accurate air quality data, the solution not only aids in better public transport management and improved public health but also facilitates enhanced quality of life and accurate predictive analysis for future planning and policy-making.

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Background

Urban areas in the Balkans have been grappling with the challenge of monitoring air quality effectively, especially in larger cities where air pollution can be a significant concern. Ensuring that the air quality data is accurate, reliable, and readily available is crucial for government institutions, public transport management, and the general population to make informed decisions regarding public health and activities.

Scenario

Several larger cities in the Balkans require a robust solution to monitor various air quality parameters, such as pollution particles, pollution gases, temperature, humidity, wind direction, and speed. The challenge is to design and implement an end-to-end solution that not only monitors but also analyzes and presents the data in a user-friendly platform, ensuring that the information is accessible and usable for various stakeholders.

Solution

In a joint project team of our software development and IoT department we developed an innovative solution named "AirThings," which encompasses specially designed air quality stations equipped with a variety of necessary sensors and a digital platform to visualize and analyze the data. The air quality stations are power-independent, utilizing solar panels and batteries, in addition to being network-powered, ensuring uninterrupted data collection. The AirThings platform provides real-time and historical data on air quality, enabling users to view and analyze pollution levels and other relevant data efficiently.

Benefits

RELIABLE AIR QUALITY MONITORING: Ensures accurate and uninterrupted data collection, providing dependable air quality monitoring across urban areas.

ENHANCED PUBLIC TRANSPORT MANAGEMENT: Enables government institutions to plan public transport schedules effectively, potentially reducing personal vehicle usage by providing data about air quality throughout the day.

IMPROVED QUALITY OF LIFE: Allows the general population to plan outdoor activities during periods of better air quality, enhancing their living conditions.

HEALTH ADVANCEMENTS: Facilitates better decision-making for outdoor activities, potentially leading to general health improvements by avoiding periods of poor air quality.

ACCURATE PREDICTIVE ANALYSIS: Utilizes accumulated data to discover trends and predict air quality with high accuracy, aiding in better planning and policy-making.