Project Proposal Submitted

To

IBM NAAN MUDHALVAN

INTERNET OF THINGS

Submitted by

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Noise Pollution Monitoring

Project Tittle: NOISE POLLUTION MONITERING ASSESSMENT

Problem Statement:

1. TO objective and analyze noise levels in different locations, identify sources of excessive noise and implement appropriate measures to mitigate the problem.
2. Collecting noise data is not enough it needs to be analyzed and Presented in meaningful way to facilitate decision making.
3. The monitoring system should include data analysis capabilities, such as identifying noise patterns, trends and peak hours and provide visualizations that are easy to understand and interpret.

PHASE 2: Innovation

In this section you need to put your design into innovation to solve the problem. Create a document around it and share the same for assessment as per the instructions in the project.

❖ Abstract:

Nowadays, each individual is expected to noise on a daily basis, and noise is often referred to as in literature as a plague of modern society noise pollution is often overlooked compared to other pollutions. The goal of this project is to present two approaches in noise reduction. Long exposure to noise pollution can be displayed as a bad moods, fatigue, headache, loss of concentration, which causes reduced work ability and ultimately permanent hearing loss.

❖ Introduction:

Noise pollution is defined as any disturbing noise that affect humans or wildlife. Although noise constantly surrounds us, noise pollution generally receives less attention than, for example, water quality and air quality concerns, because it cannot be seen, tasted or smelled. There are two ways of dealing noise pollution in terms of There are two ways of dealing noise pollution in terms of reducing its levels. One is more traditional approach and other a more modern and very popular today with many directions. This are all the introduction about the project of noise pollution.

Outline:

❖ Project Objective and Scope:

Define the specific objectives of your project, such as monitoring noise levels in urban areas, near industrial sites, in residential neighborhoods, or around schools and hospitals.

❖ Hardware Requirements:

➢ Microphones or sound sensors to capture noise data.
➢ Microcontrollers or IoT development boards (e.g., Arduino, Raspberry Pi, or specialized IoT platforms).
➢ Connectivity options (e.g., Wi-Fi, LoRa, or cellular) to transmit data to the cloud.
➢ Power source (battery or mains power) for your IoT devices.

❖ Software Development:

➢ Develop firmware for your IoT devices to capture noise data from the sensors.
➢ Implement algorithms for noise analysis and data processing on the IoT devices, if necessary.
➢ Set up communication protocols to transmit data to a cloud platform.

❖ Scaling and Replication:

➢ Expand successful noise reduction initiatives to other cities and regions.

- ➢ Share best practices and lessons learned with other organizations and regions.
- ➢ Collaborate with international partners for knowledge exchange.

❖ Funding and Sustainability:

- ➢ Explore funding sources such as government grants, corporate sponsorships, and philanthropic organizations.
- ➢ Develop a sustainability plan to ensure the project's long-term viability.
- ➢ Establish partnerships for ongoing maintenance and monitoring.
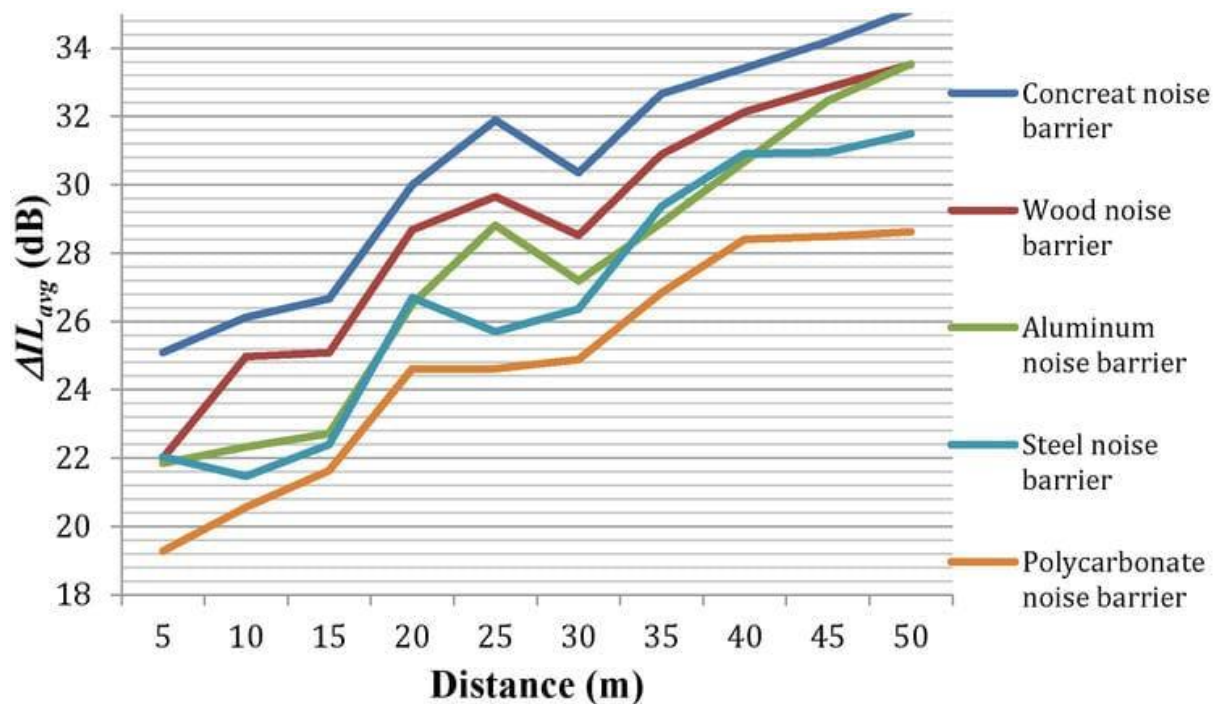
❖ Cloud Platform:

- ➢ Choose a cloud platform (e.g., AWS, Azure, Google Cloud) to store and process the noise data create a database to store the captured noise.
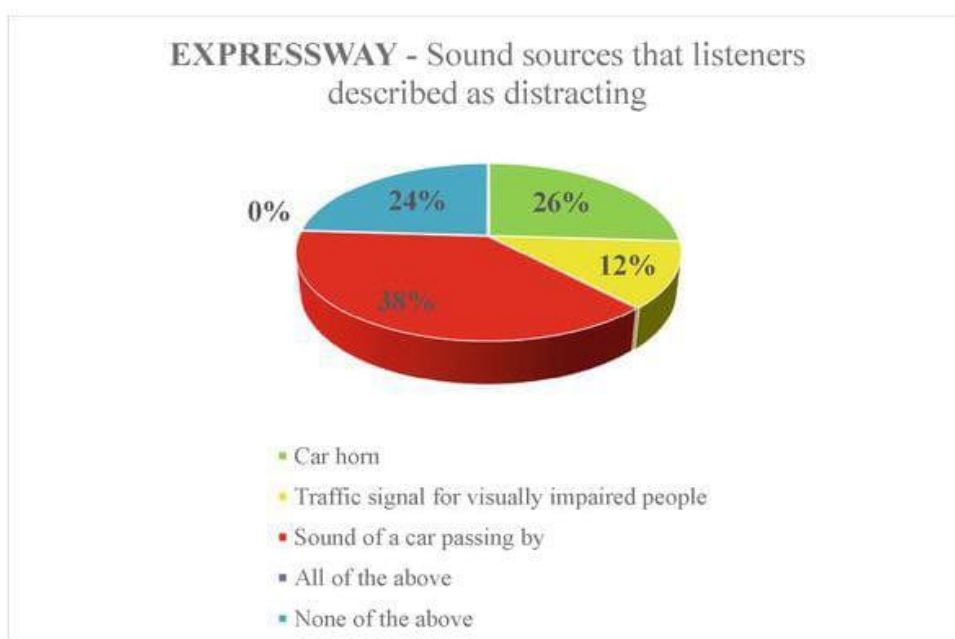
❖ Alerting System:

- ➢ Set up automated alerts for when noise levels exceed predefined thresholds.
- ➢ Notifications can be sent via email, SMS, or mobile app notifications.

NOISE BARRIER:

SOUNDSCAPE ANALYSIS:

CONCLUSION:

By following this outline, my team can develop and effective IoT-based noise pollution monitoring system that helps manage noise levels and raise awareness about noise pollution issues in various environments.