

Audio Based weather predictions

USING MACHINE LEARNING

Problem Statement

- Weather conditions like rain, wind, and thunder produce distinct sound patterns.
- This project aims to classify weather conditions based on audio input using machine learning.
- Applications include smart homes, alert systems, and weather forecasting

Challenges and Novelty

- Ambiguity of sounds: Distant thunder, wind and rain can sound similar
- Background noise: Traffic or voices can interfere with audio classification
- Novelty: Audio-based weather classification systems are rare, adding a new layer to environmental monitoring.

Demo Objectives

- The goal is to demonstrate a functional prototype that classifies weather conditions (rain, wind, thunder, snow, hail) using audio data.
- The system should work in real-time and be robust against background noise
- Both live and recorded sound demonstrations will be presented



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