

1. Air Quality Prediction:

- Question: Can we predict future air quality based on past data from environmental sensors?
- Algorithm: Use a method like ARIMA or LSTM to forecast air quality trends.
- Inputs: Previous data from sensors measuring things like CO2 levels and particulate matter.
- Expected Outputs: A model that can tell us what air quality might be like in the future.
- Pollution Hotspot Identification:

2. Question: Can we find areas with consistently bad air quality using data from environmental sensors?

- Algorithm: Use clustering techniques like K-means to group sensor data and find areas with high pollution.
- Inputs: Data from sensors measuring pollution levels at different locations.
- Expected Outputs: A map showing where pollution is worst, helping us focus efforts to clean the air.
- Health Impact Forecasting:

3. Question: Can we predict how air pollution affects people's health using environmental sensor data?

- Algorithm: Use regression models like linear regression to see how pollution levels relate to health problems.
- Inputs: Data from sensors, plus info about local populations and their health records.
- Expected Outputs: A model that tells us how likely it is for people to get sick based on air pollution levels.