Air Quality in Italian City

Italian city witnessed a high amount of ozone depletion due to various physical components present in air. With an objective to determine the quality of air in terms of ozone depletion, machine learning was identified as the pervading mechanism by the meteorology department. Data on multiple detrimental contents in air was captured using sensors setup in a polluted location of Italian city. All the attributes are well studied and the prepared dataset was all the way used for Regression Analysis with R.

The test results with different algorithms were combined for better understanding for the users at meteorological department.

Data Set

The dataset includes various input features like

1. **Ozone**: Mean ozone in parts per billion from 1300 to 1500 hours at Roosevelt The target variable is 'Ozone'.
2. **Solar.R**: Solar radiation in Langleys in the frequency band 4000-7700 Angstroms from 0800 to 1200 hours
3. **Wind**: Average wind speed in miles per hour at 0700 and 1000 hours.
4. **Temp**: Maximum daily temperature in degrees Fahrenheit.
5. Month: numeric Month (1–12)
6. **Day :** numeric Day of month (1–31)

Objective

1. To study the impact of environment parameters on ozone depletion
2. To develop predictive models for assessing airquality.

Challenge

1. Develop Simple Linear Regression models between input feature and the target
2. Develop Multiple Linear Regression models for input features and target.
3. Compare and contrast the models and recommend the optimal model.