Weather Conditions

1. Check the structure and contents of the dataset. What are the key features, and what do they represent?
2. Are there noticeable trends or correlations?
3. Based on the exploratory analysis, what would you consider good candidates for linear regression? Why or why not?
4. Build and evaluate the Linear Regression Model for Temperature and Pressure
5. What is your model's performance?

Extra:

6. Identify and select relevant predictors for pressure.

7. Compare the performance of multiple linear regression to the simple linear regression model

Data descriptions:

No: row number

year: year of data in this row

month: month of data in this row

day: day of data in this row

hour: hour of data in this row

PM2.5: PM2.5 concentration (ug/m^3)\*

PM10: PM10 concentration (ug/m^3)\*

SO2: SO2 concentration (ug/m^3) (Sieros dioksidas - SO₂ – tai dujinė oro tarša, atsirandanti deginant kurą, kuriame yra sieros)

NO2: NO2 concentration (ug/m^3) (Azoto dioksidas - NO₂ – tai reaktyvios dujos, atsirandančios deginant kurą esant aukštai temperatūrai)

CO: CO concentration (ug/m^3) (Anglies monoksidas)

O3: O3 concentration (ug/m^3) (Ozonas)

TEMP: temperature (degree Celsius)

PRES: pressure (hPa)

DEWP: dew point temperature (degree Celsius)

RAIN: precipitation (mm)

wd: wind direction

WSPM: wind speed (m/s)

station: name of the air-quality monitoring site

**\* PM2.5 -Particulate Matter**  ≤  **2.5** μm**. Labai smulkios kietosios dalelės, kurių skersmuo iki 2.5 mikrometrų. PM10 Particulate Matter ≤ 10 μm didesnės kietosios dalelės, kurių skersmuo iki 10 mikrometrų. - Aukšta PM2.5 ar PM10 koncentracija = prasta oro kokybė = rizika sveikatai**