Bike Sharing Demand Prediction

Regression

Project Description

Business Context

Currently Rental bikes are introduced in many urban cities for the enhancement of mobility comfort. It is important to make the rental bike available and accessible to the public at the right time as it lessens the waiting time. Eventually, providing the city with a stable supply of rental bikes becomes a major concern. The crucial part is the prediction of bike count required at each hour for the stable supply of rental bikes.

Data Description:

Fields	Description
Date	Date
Hour	Hour of the day (0-23)
Temperature	Temperature of the day
Humidity	Humidity measure
Windspeed	Windspeed
Visibility	Visibility measure
Dew Point Temperature	Dew Point Temperature Measure
Solar Radiation	Solar Radiation Measure
Rainfall	Rainfall in mm
Snowfall	Snowfall measure
Seasons	1 = spring, 2 = summer, 3 = fall, 4 = winter
Holiday	Whether a holiday or not
Functional Day	Whether a functional day or not

Main Libraries to be Used:

- Pandas for data manipulation, aggregation
- Matplotlib and Seaborn for visualisation and behaviour with respect to the target variable
- NumPy for computationally efficient operations
- Scikit Learn for model training, model optimization, and metrics calculation

Project Architecture: