Problem Statement:

The company wants to know:

- Which variables are significant in predicting the demand for shared electric cycles in the Indian market?
- How well those variables describe the electric cycle demands

Rest of the solution is in the notebook.

Insights

- Whenever the humidity is less than 20, number of bikes rented is very low.
- Whenever the temperature is less than 10, number of bikes rented is less.
- Whenever the windspeed is greater than 35, number of bikes rented is less.
- Most vehicles are booked between 4-8 in the evening and booking goes down between 12-4 at night.
- Above pictures tells us that Count is linearly related to temp, atemp and inversely related to humidity & windspeed.
- Less number of people hire cycle when it is slow rain and more number of people hire when weather is clear.
- In summer and fall seasons more bikes are rented as compared to other seasons.
- Whenever its a holiday more bikes are rented.
- It is also clear from the analysis that whenever day is a holiday or a weekend, slightly more bikes were rented.
- Whenever there is rain, thunderstorm, snow or fog, less bikes were rented.
- Less Number of people take vehicle in spring

Recommendations

- In **summer** and **fall** seasons the company should have more bikes in stock to be rented. Because the demand in these seasons is higher as compared to other seasons.
- With a significance level of 0.05, **working day** has no effect on the number of bikes being rented.
- In very low **humid** days, company should have less bikes in the stock to be rented.
- Whenever temperature drops to less than 10 or in very cold days, company should have less bikes.
- Whenever the windspeed is greater than 35 or in thunderstorms, company should have less bikes in stock to be rented.

- Company can come up with some lucrative membership plan for casual users, riding the bike in fall season.
- We can arrange more vehicles during peak booking hours, and during night company can work with less number of vehicles, to reduce cost.

Link: https://colab.research.google.com/drive/1DNb8CTRIwmAqx6u2yjh7epxBWLzj3hOm