- The independent variables I am using here are:
  1. Distance
  2. Season (Summer, Winter, Fall and Spring)
  3. Day of the week (Monday to Sunday)

As suggested, I ran separate analysis for bike and scooter and below are the coefficient values.

For Bike:

Dependent variable df[‘usage_count’] on Day level

Winter:
Coefficient Values:
const -1.257730
distance 0.000677
Friday -0.260182
Monday -0.147638
Saturday -0.366728
Sunday -0.269151
Thursday -0.161503
Tuesday 0.016061
Wednesday -0.068588

Summer:
Coefficient Values:
const 3.411706
distance 0.000407
Friday 0.527003
Monday 0.344872
Saturday 0.652011
Sunday 0.519432
Thursday 0.483410
Tuesday 0.435831
Wednesday 0.449148

- The above results indicate that distance has a minimal impact on the event count.
- In the winter model, events are expected to be lower on Friday, Monday, Saturday, Sunda y, Thursday, and Wednesday compared to Tuesday.
- In the summer model, all days are expected to have higher event counts compared to the r eference day.

For E-scooter:

Summer:
Coefficient Values:
const -6.288729
distance 0.001010
Friday -0.777862
Monday -1.038573
Saturday -0.743120
Sunday -0.912105
Thursday -0.890540
Tuesday -0.958197
Wednesday -0.968332

Winter
Coefficient Values:
const 111.888936
distance -0.008260
Friday 16.150443
Monday 16.003775
Saturday 15.900499
Sunday 15.803646
Thursday 16.087227
Tuesday 16.006627
Wednesday 15.936719

- In the summer model, the expected number of e-scooter trips increases by exp (0.001010) ≈ 1.001 times.
- In the winter model, the expected number of e-scooter trips decreases by exp (-0.008260) ≈ 0.992 times.