# Analysis according to research paper referred by sponsor.

Questions posed by sponsor post regression analysis (Poisson)

- When you run the regression, what are independent variables?
- Also, what's coefficient and significance?
- Can you show me data like table 4 in my paper?
- Also, would you run each ride share separately as a next step so that we can see what factor affects each ride share?

The paper referring to: **[1] The Anatomy of the Daily Usage of Bike Sharing Systems: Elevation, Distance and Seasonality**

Answers to questions:

**Independent Variables:** As you requested, the independent variables used in the model are:

1. Distance

2. Season (Summer, Winter, Fall and Spring)

3. Day of the Week (Monday to Sunday)

Model Results: I've attached the document that includes:

**Coefficients:** Tables with the coefficient values for both bike and e-scooter models.

**Significance:** I've included notes on the expected impact of each variable based on the coefficient signs (For instance, positive coefficients indicate a positive relationship, negative coefficients indicate a negative relationship).

**My findings: Distance:** While the coefficient values for distance are relatively small, they do indicate a positive correlation with event count for both bikes and e-scooters.

**Season:** Season has a stronger influence on e-scooter usage compared to bikes. There's a significant decrease in e-scooter usage during winter months.

**Day of the Week:** Both bike and e-scooter usage show variations across weekdays.

Weekends (Friday-Sunday) see a decrease in ridership compared to weekdays for bikes (with Tuesday being the reference day).

However, for e-scooter usage, there's a consistent decrease across all days compared to a reference day.