**EDA – Case Study**

The given dataset consists of data related to ride-sharing service costs, encompassing various factors that could influence the dynamic pricing model of rides. It includes 1,000 records with the following key attributes:

* Number\_of\_Riders: The number of riders participating in the ride.
* Number\_of\_Drivers: The number of drivers available at the time of booking.
* Location\_Category: The category of the location (Urban, Suburban, Rural).
* Customer\_Loyalty\_Status: The loyalty status of the customer (e.g., Silver, Regular).
* Number\_of\_Past\_Rides: The number of past rides the customer has had.
* Average\_Ratings: The average ratings given to the drivers by the customer.
* Time\_of\_Booking: The time of the day when the booking was made.
* Vehicle\_Type: The type of vehicle booked for the ride.
* Expected\_Ride\_Duration: The expected duration of the ride in minutes.
* Historical\_Cost\_of\_Ride: The cost of the ride, which serves as the target variable for predictive modeling.

**Your task is to conduct an Exploratory Data Analysis (EDA) to identify and select the most important features for predicting the Historical\_Cost\_of\_Ride.**

**Steps:**

1. Start the EDA by importing the necessary Python libraries
2. Perform data quality check to identify any missing values or incorrect data types
3. Analyze the distribution of numerical features to understand their distribution.
4. Plot distributions for numerical features.
5. Explore the categorical features to understand their distribution.
6. Plot the counts of each category for the categorical features.
7. Give Analysis Summary for Categorical and Numerical Features.
8. Perform Bivariate Analysis to explore the relationships between the target variable (Historical\_Cost\_of\_Ride) and the other features. (Hint: use scatter plots of numerical features against the Historical\_Cost\_of\_Ride)
9. Examine how the categorical features relate to the Historical\_Cost\_of\_Ride (Hint: use box plots to explore the variance in ride costs across different categories)
10. Give a short summary of insights gathered from EDA for Feature Selection and list the features identified as potentially important for predicting ride costs.