

## **Recommendations:**

### **Data Quality:**

- **Incomplete Feature Information:** The dataset lacks complete information for some features, while others require a deeper understanding. Address these issues to ensure accurate model training and analysis.

### **Seasonality and Opportunities:**

- **Festive Season Spike:** The dataset includes data from September and October, historically high-volume months for online orders. Collaborate with online platforms and registered sellers to leverage this peak season.

### **Route Optimization:**

- **Cost and Feedback Integration:** Include route-based costs and feedback (road conditions, tolls, overhead expenses) to optimize trip planning based on priorities (time, distance, or cost).

### **Vehicle Maintenance:**

- **Scheduled Maintenance Window:** Since no trips occur between the 4th and 10th of each month, utilize this window for routine vehicle maintenance and servicing. This improves reliability, fuel efficiency, and driver safety.

### **Machine Learning Model Improvement:**

- **Discrepancies between Actual and Predicted Values:** Investigate discrepancies between actual and predicted values for distance and travel time (actual vs. OSRM, OSRM segments vs. actual segments). Implement strategies to improve model accuracy.

### **Multimodal Transportation:**

- **Exploring Rail Transport:** Analyze the feasibility of using railways for long-distance or interstate goods transportation to potentially reduce costs or enhance efficiency.