Uber EDA Project – Insights Summary

Chart 1: Trip Status Distribution

- **Why this chart:** To understand how trips are distributed among different statuses.
- **Insights:** The highest number of requests are marked as **Cancelled**, followed by **No Cars Available** and then **Trip Completed**.
- **Business Impact:** Indicates inefficiencies in the booking process. High cancellation rates reduce customer satisfaction. This highlights the need for better allocation, driver engagement, and improved service availability.
- **Negative Growth:** Yes, high cancellation and "no car" issues indicate lost revenue and poor user experience.

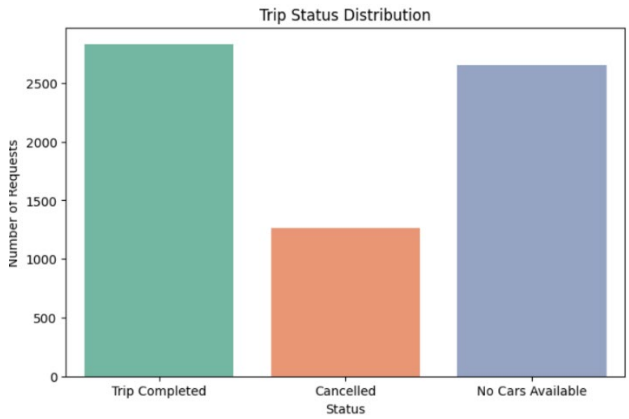

Chart 2: Pickup Point Distribution

- **Why this chart:** To identify which pickup point (City or Airport) has the most demand.
- **Insights:** The **City** has significantly more trip requests than the Airport.
- **Business Impact:** Helps in planning driver allocation — more vehicles should be stationed in the City to meet the high demand.

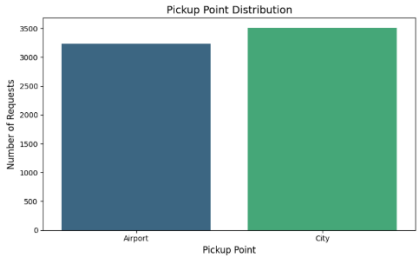

Chart 3: Trip Status by Pickup Point

- **Why this chart:** To compare trip status across different pickup points.
- **Insights: City** has more cancellations, while the **Airport** faces more "No Cars Available" issues.

- **Business Impact:** Indicates different issues in different locations — tailored strategies should be applied (e.g., incentives for Airport pickups, improving driver reliability in the City).

Chart 4: Request Hour Distribution

- **Why this chart:** To see when users are most likely to request rides.
- **Insights:** Peak hours are **7 AM–9 AM** and **5 PM–8 PM**.
- **Business Impact:** Helps optimize driver schedules for peak times.

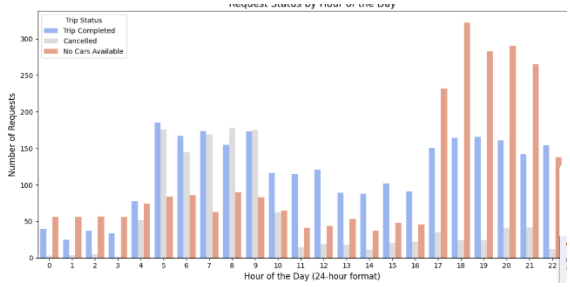

Chart 5: Trip Status by Hour

- **Why this chart:** To understand trip behavior during the day.
- **Insights:** Most cancellations occur during morning peak, while "No Cars" are common at night.
- **Business Impact:** Suggests driver shortage in critical hours. Addressing this can improve completed rides and revenue.

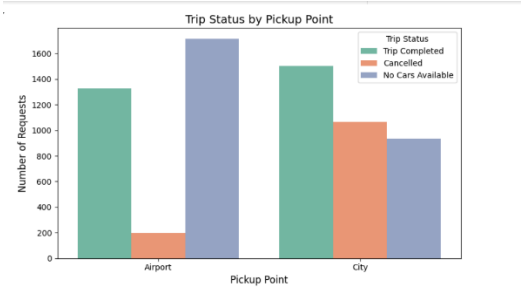

Chart 6: Pickup Point by Hour

- **Why this chart:** To understand where demand originates throughout the day.
- **Insights:** City requests spike in the morning; Airport requests increase in the evening.
- **Business Impact:** Time-based driver distribution strategy can be implemented.

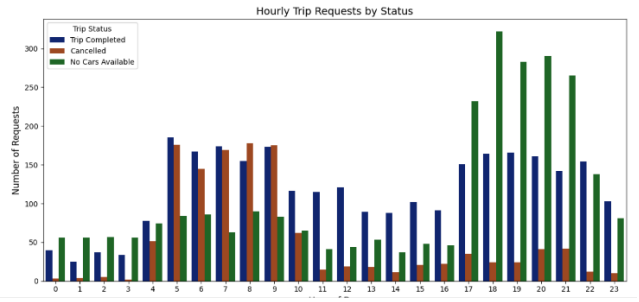

Chart 7: Pickup Point vs Trip Status by Hour

- **Why this chart:** To get a detailed look at demand and failure reasons hour-wise.
- **Insights:** City has cancellations in the morning, Airport has "No Cars" in the evening.
- **Business Impact:** Can use targeted solutions like surge pricing, driver bonuses, or automated driver alerts.

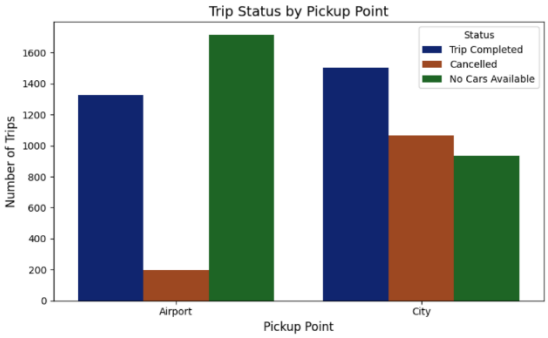

Chart 8: Trip Completion by Hour

- **Why this chart:** To know when most trips are successfully completed.
- **Insights:** Most completed trips occur in the early morning and late evening.
- **Business Impact:** Use data to predict high-performing time slots and increase vehicle availability then.

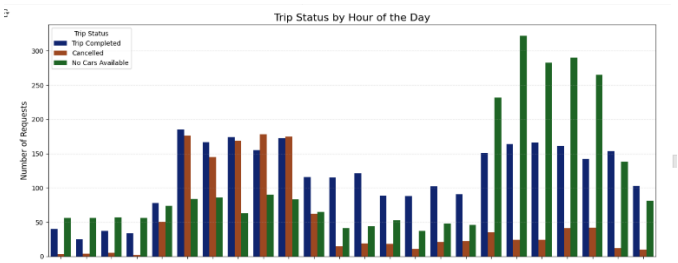

Chart 9: Completed Trips by Pickup Point

- **Why this chart:** To assess which pickup location yields more completed trips.

- **Insights:** Most completed trips come from the **City**.
- **Business Impact:** Shows high success in the City, but Airport still needs improvement.

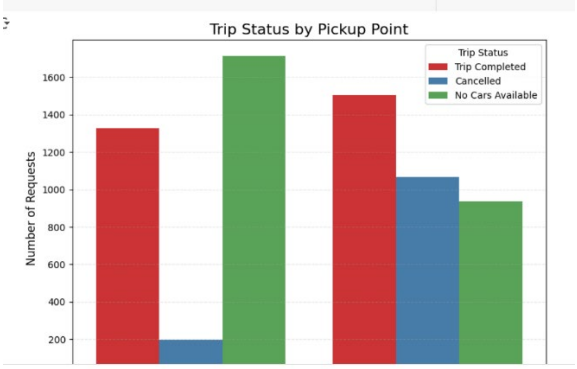

Chart 10: Percentage of Trip Status by Pickup Point

- **Why this chart:** To visualize failure rate per pickup point.
- **Insights:** Airport faces more "No Cars" while the City faces more cancellations.
- **Business Impact:** Can guide customer service improvements and dynamic fleet allocation.

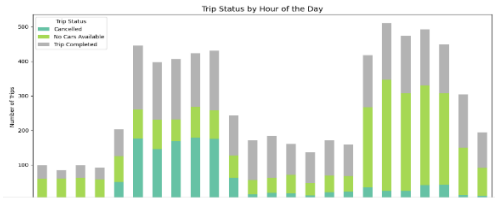

Chart 11: Trips by Day

- **Why this chart:** To understand trends across days of the week.
- **Insights:** High demand on weekdays, particularly Monday to Friday.
- **Business Impact:** Plan driver shifts based on weekly trends.

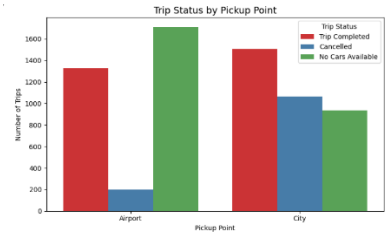

Chart 12: Trip Status by Day

- **Why this chart:** To understand failure reasons day-wise.
- **Insights:** Cancellations and no car availability follow weekday demand.

- **Business Impact:** Adds weight to weekday-focused strategy.

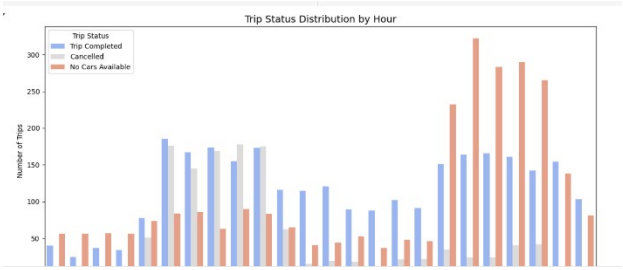

Chart 13: Request Hour vs Pickup Point by Trip Status

- **Why this chart:** To analyze combinations of time, location, and outcome.
- **Insights:** Complex but reveals layered insight — e.g., more success in the City during off-peak.
- **Business Impact:** Enables hyperlocal and hourly strategy building.

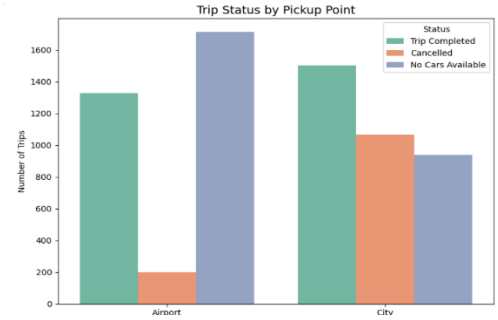

Chart 14: Correlation Heatmap

- **Why this chart:** To understand relationships between numerical variables.
- **Insights:** Minimal strong correlation among numerical variables.
- **Business Impact:** Confirms that categorical variables (like status, pickup point) are more impactful for business insights.

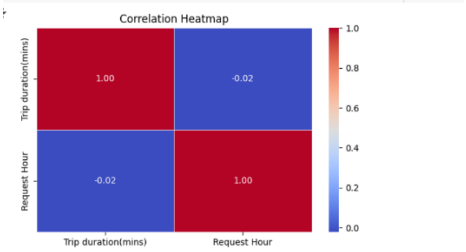

Chart 15: Pair Plot

- **Why this chart:** For multi-variable relation exploration.

- **Insights:** Confirms lack of strong numerical trends, but possible clustering based on categories.
- **Business Impact:** Suggests categorical analysis is more meaningful here.