Uber Supply-Demand Gap Analysis

- From our analysis using we can clearly observe a **supply-demand mismatch** in Uber services, especially during the **Evening, Night, and Early Morning** time slots.
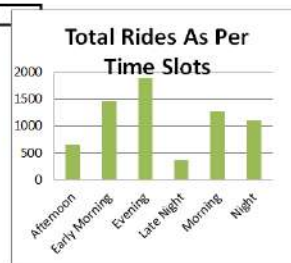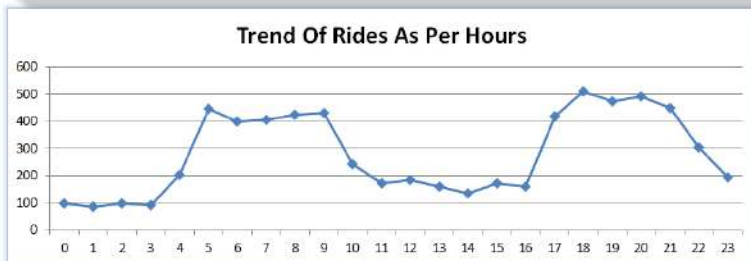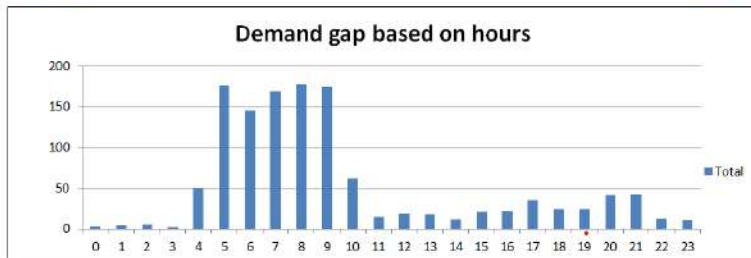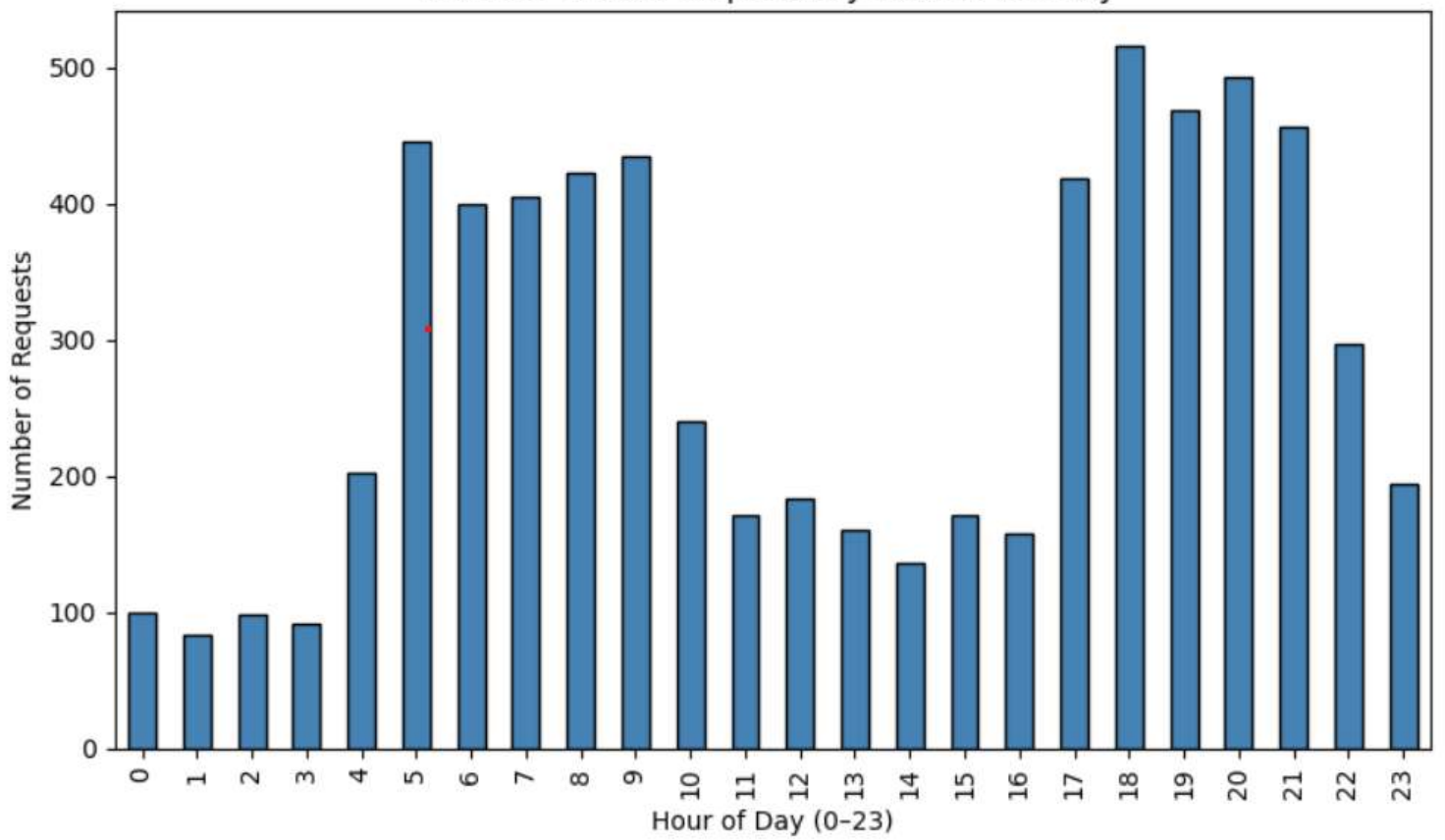- As seen in (Demand Gap Bar Chart) and(Requests per Time Slot Line Chart), the number of **unfulfilled ride requests (around 3900)** is significantly higher than fulfilled requests (around 2800), indicating a notable **demand gap**.
- According to (Ride Request Status by Time Slot):
  - **Trip cancellations** peak during **Early Morning and Morning** time slots.
  - **No car availability** is highest during **Evening and Night**, with the **Evening** slot showing the greatest number of denied requests due to car unavailability.
- (Pickup Point Bar Chart) and (Pie Chart - Car Availability) highlight that:
  - **City requests outnumber airport requests**, indicating an imbalance in pickup demand.
  - Only **60.7%** of the total requests had cars available, leaving nearly **40%** of users without a ride.
- **Hourly trends** further validate that:
  - **Ride requests spike during 5–10 AM and 5–10 PM.**
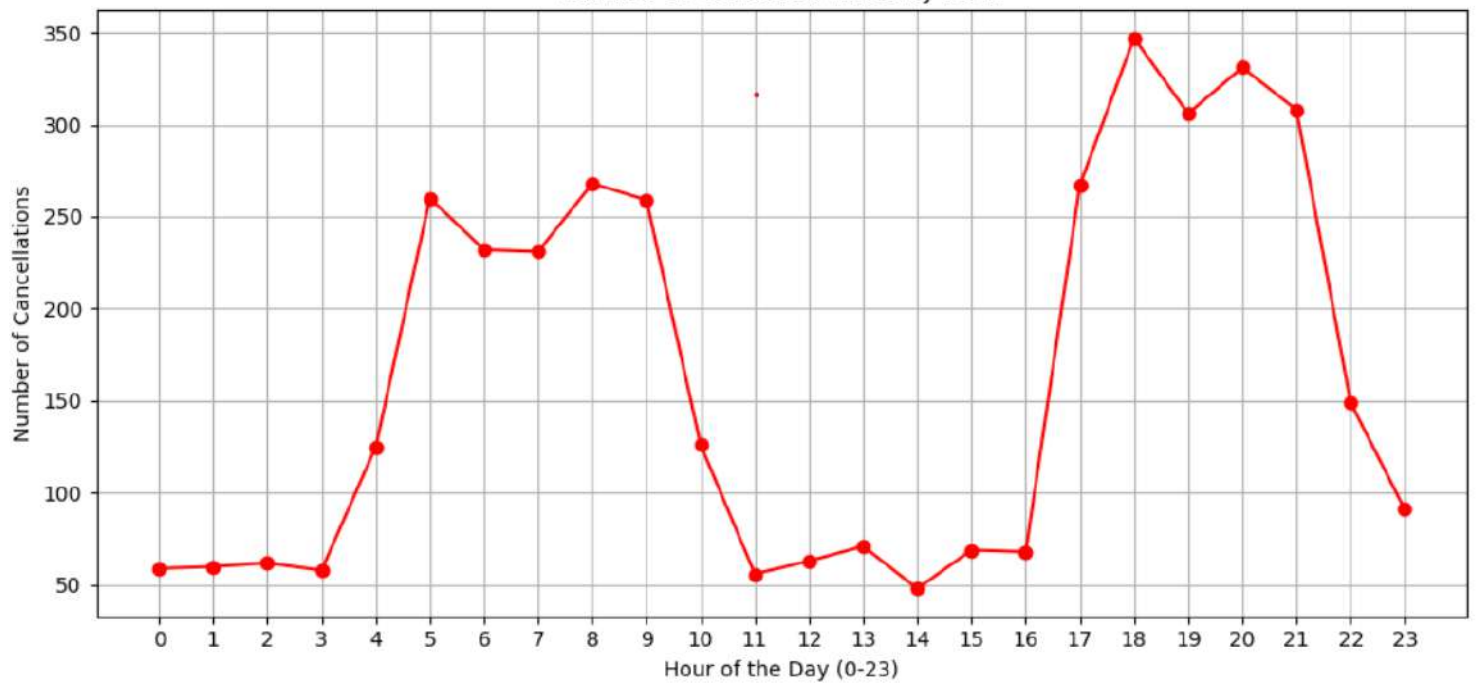 - The **early morning surge (5–9 AM)** is met with a high rate of cancellations and unavailability.

UBER DATA ANALYSIS

Demand gap based on hours

Trend Of Rides As Per Hours

Total Rides As Per Time Slots

Pickup Point Count
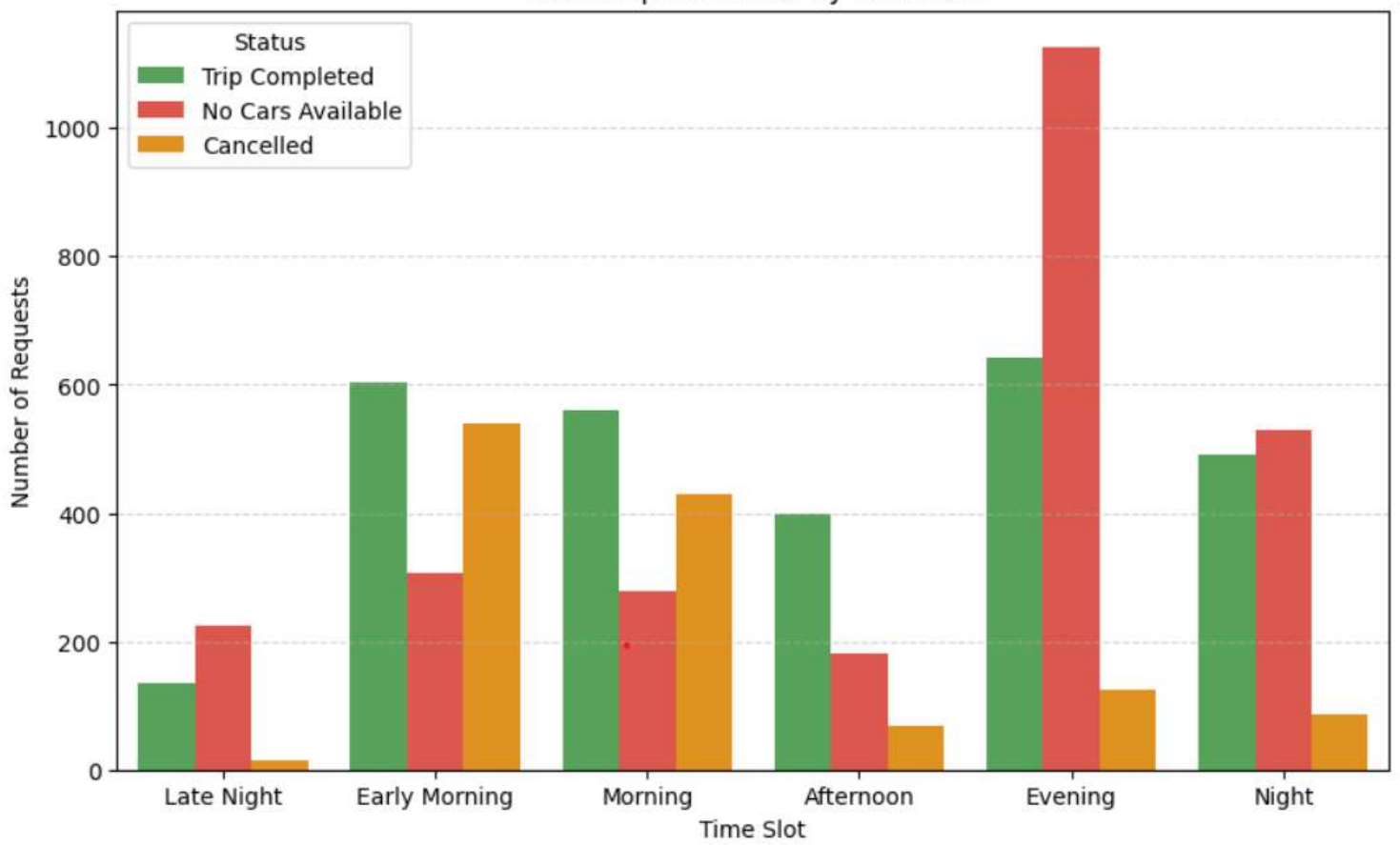

Ride Success

% week
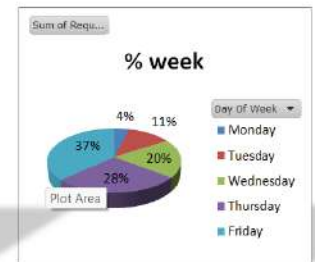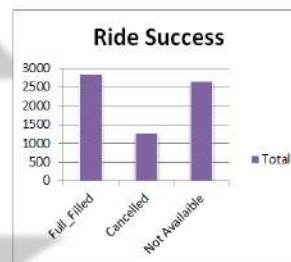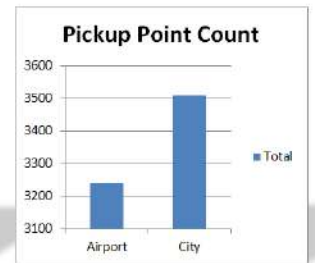
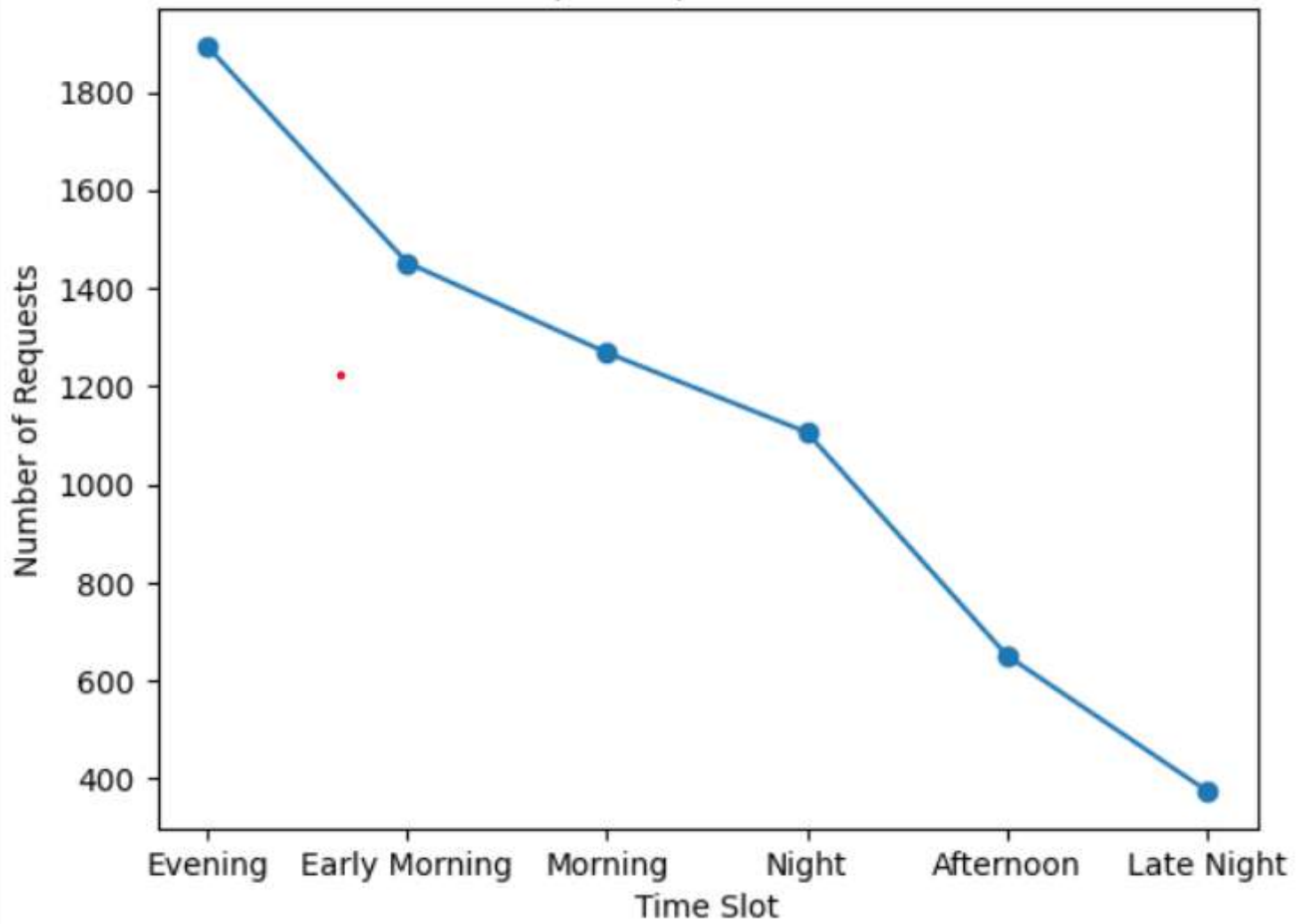Number of Ride Requests by Hour of the Day

Number of Cancelled Rides by Hour
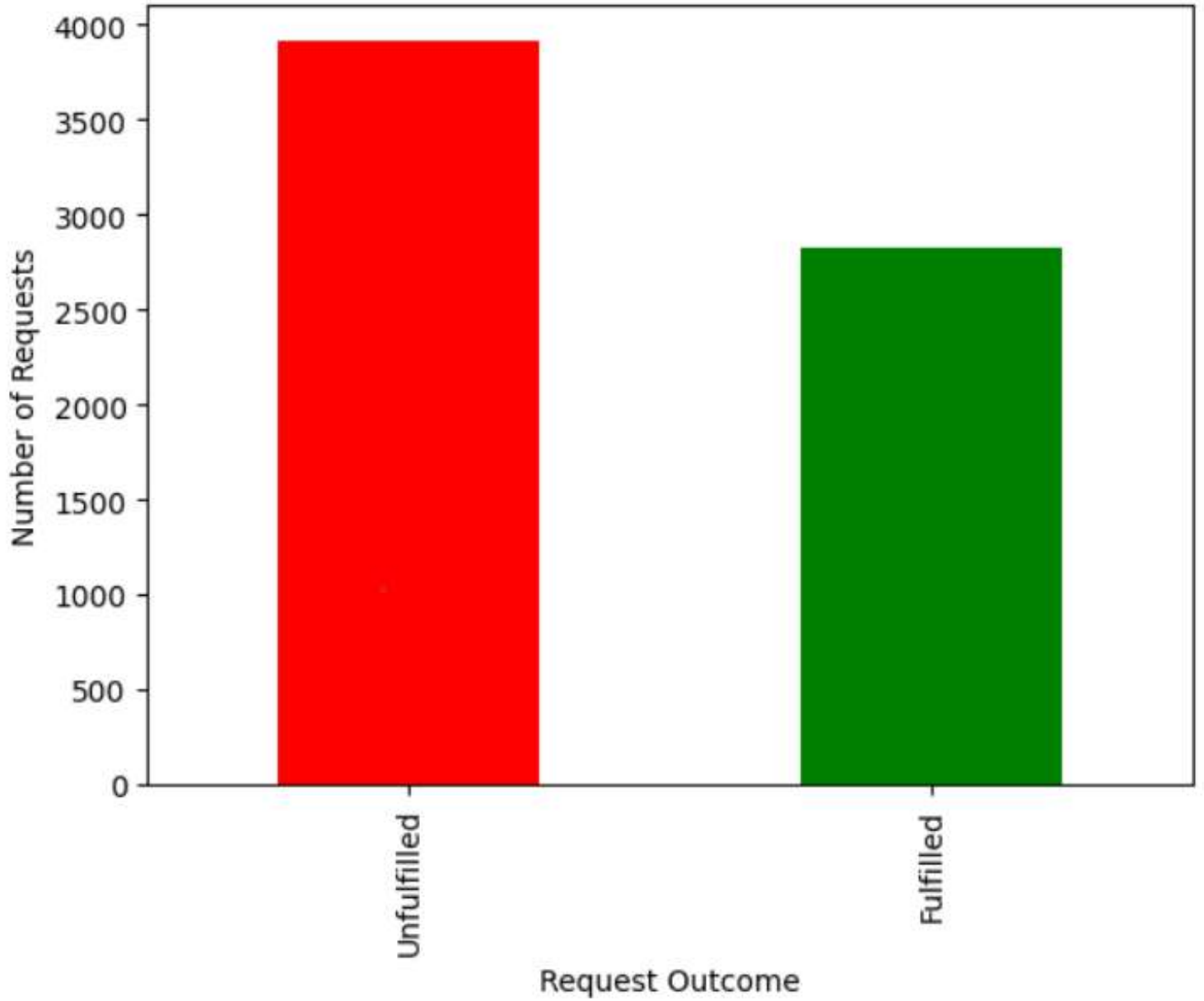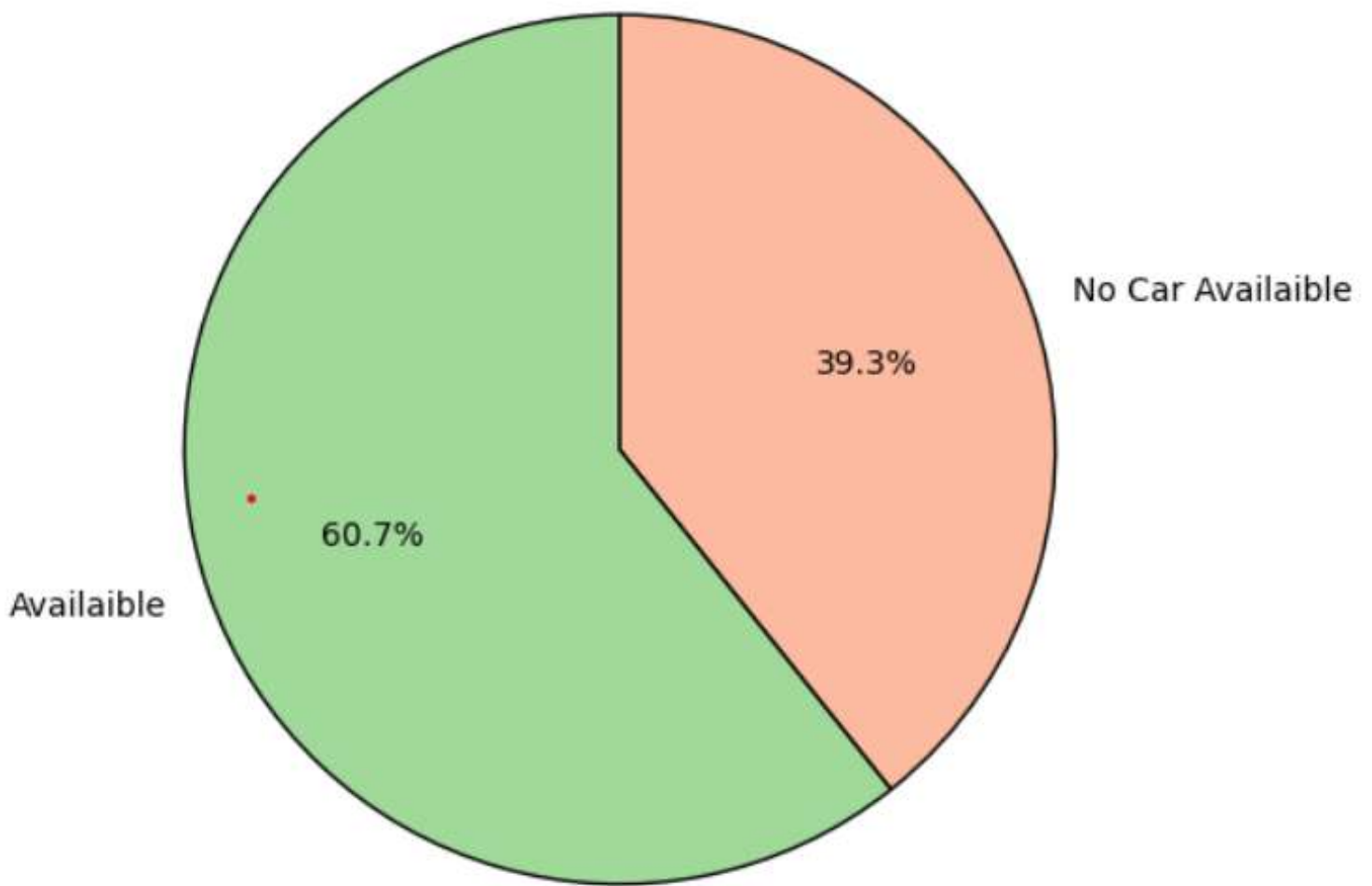
Ride Request Status by Time Slot

Requests per Time Slot

Demand Gap

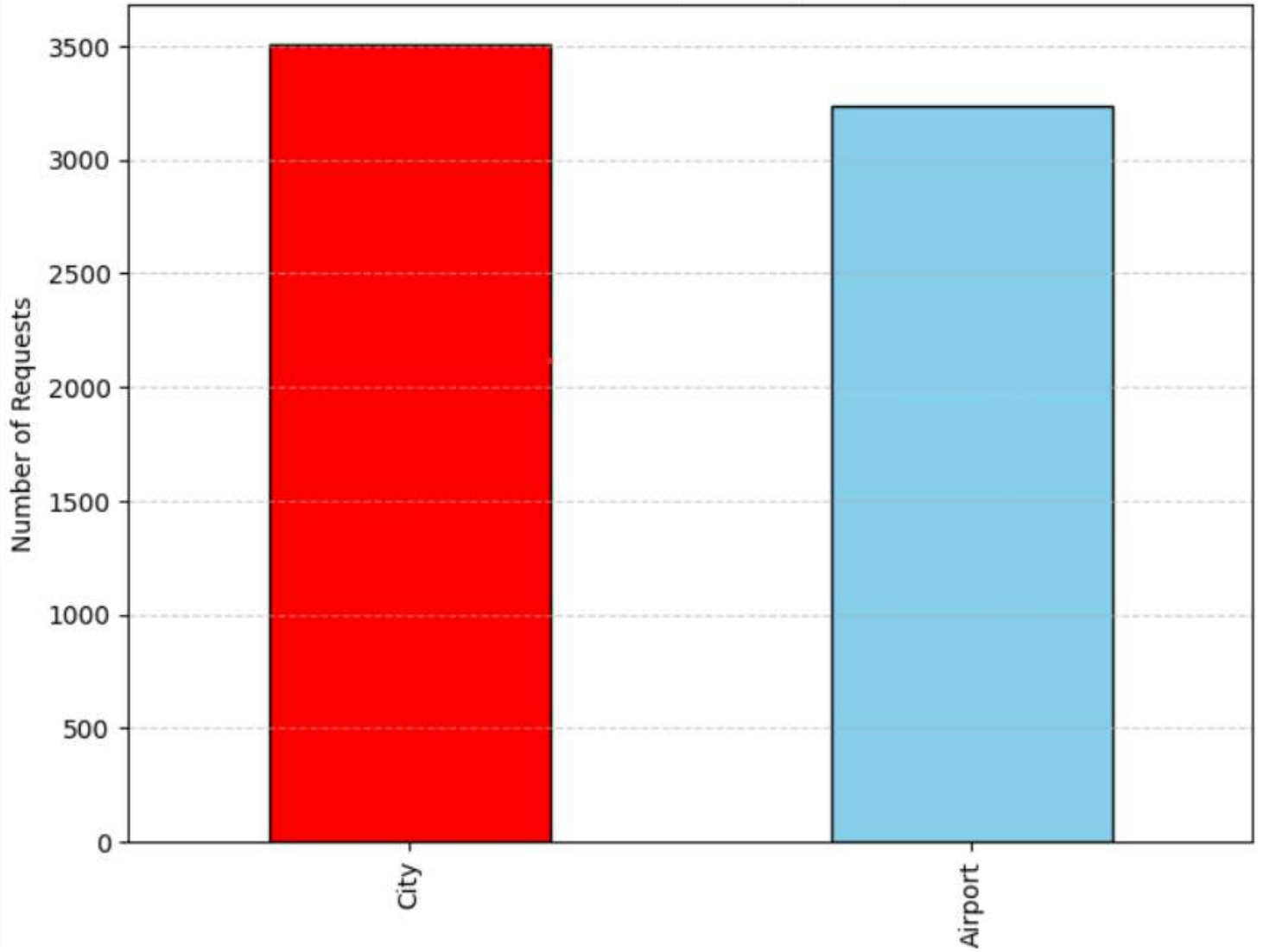# Overall Car Avaibility

Number of Ride Requests by Pickup Point

Proposed Solutions to Bridge the Supply-Demand Gap

1. **Incentivize Drivers for Peak Hours**
   - Introduce "Rush Hour" incentives for drivers during **Early Morning (5–9 AM)** and **Evening (5–10 PM)**.
   - Boosts supply during demand peaks and encourages timely pickups.
2. **Implement Night Shift Roster**
   - Designate **night-specific shifts** for drivers to address the unavailability issues during **Night and Late Night** slots.
   - Increase driver pay or bonuses to attract more participation in night hours.
3. **Penalty-Reward Model**
   - Discourage last-minute cancellations with **driver-side penalties**.
   - Provide **completion bonuses** for consistently accepting and fulfilling rides, especially from the Airport and during early hours.