Uber Supply Demand Gap Insights

Findings and Observations :

• The data analysis reveals a significant supply-demand gap during Early Morning and Evening hours, particularly for requests originating from the Airport and City, as seen in Chart 1.1, Chart 1.2, and Chart 1.3.

• From the exploratory data analysis:

- A large number of cancellations were observed during the early morning hours (mainly from City pickups), shown in Chart 2.
- A high volume of “No Cars Available” cases occurred during the evening hours (mainly from Airport pickups), as illustrated in Chart 3.

• As visualized in Chart 4, the City faces more ride cancellations, while the Airport suffers from driver unavailability in the evening.

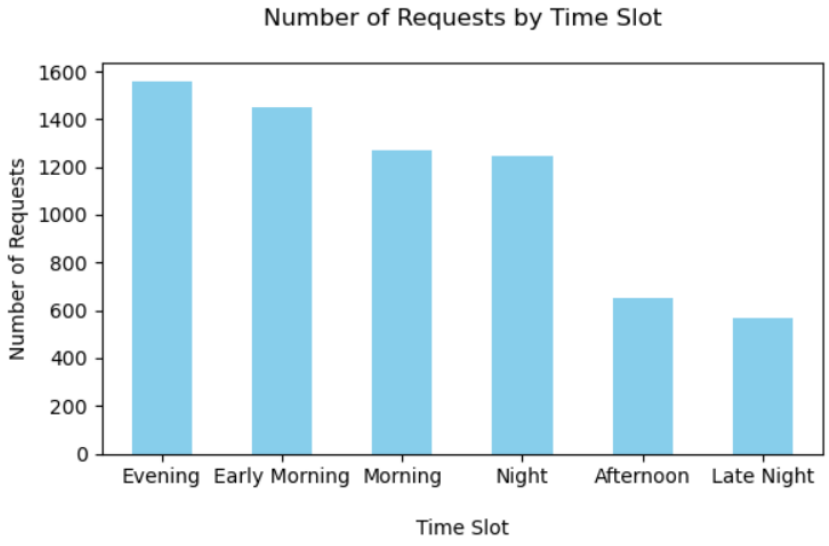
• Chart 5 shows a clear drop in trip fulfillment rate during peak hours, reflecting a mismatch between ride requests and available supply.

• And highlights hourly trends in trip status, confirming that:

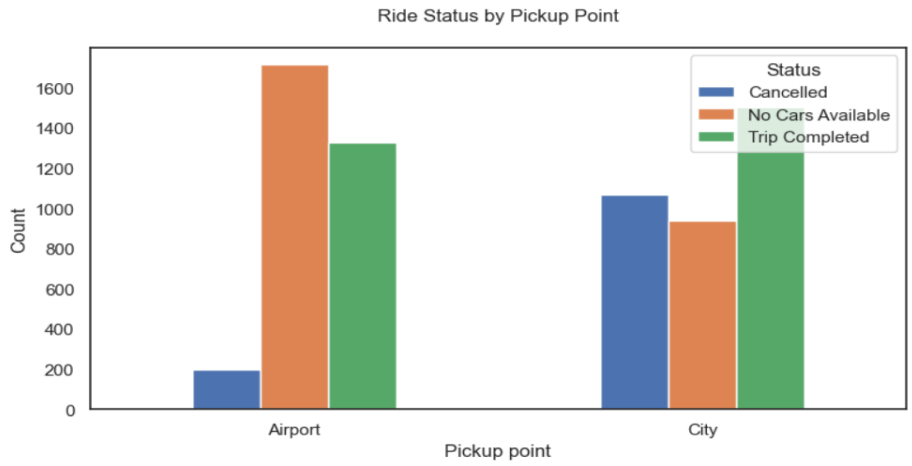
- Morning time slots (5 AM–9 AM) have high cancellation rates,
- Evening time slots (5 PM–9 PM) show major unavailability of cars.

Chart References

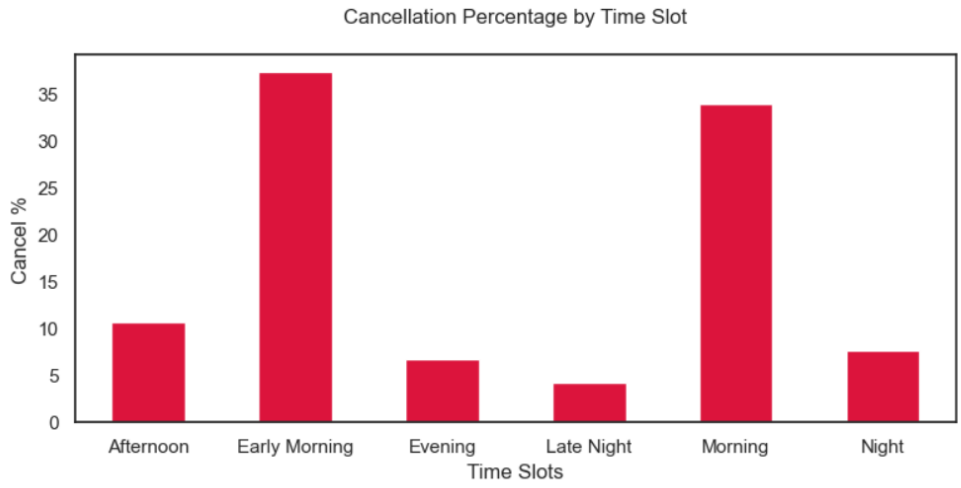
- Chart 1.1: Ride request volume by time slot



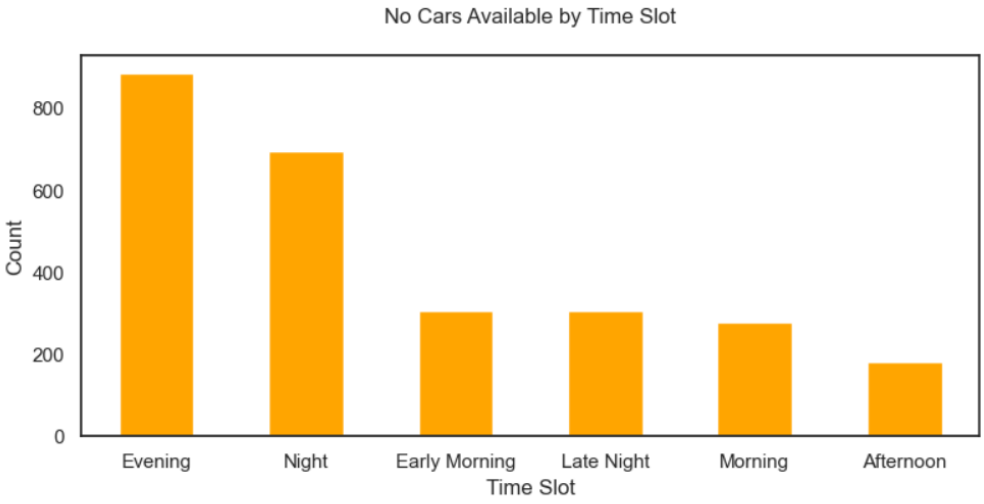
- Chart 1.2: Trip status distribution by pickup point



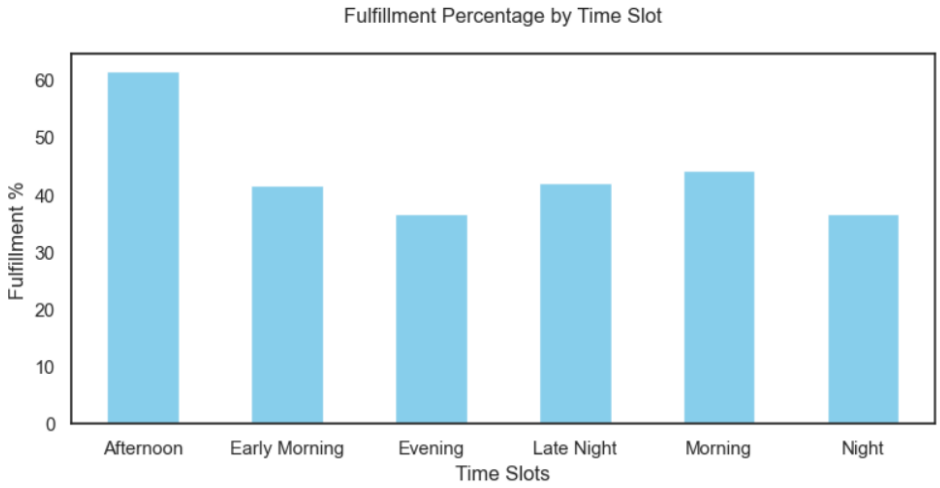
- Chart 2: Cancellations during early hours



- Chart 3: Unavailability cases during evening



- Fulfillment rate by time slot



Solutions for Supply-Demand Gap :

• Peak-Hour Incentives
Offer additional incentives to drivers who accept rides during early morning and evening peak hours, especially from high-demand areas like the Airport and City center.

• Dedicated Night Shift Planning
Assign drivers to night-specific shifts to handle airport pickups and prevent supply shortages after 7 PM.

• Pre-Booking Feature
Allow passengers to schedule rides in advance, particularly for airport drop-offs during rush hours.

• Predictive Driver Allocation
Use hourly and location-based trends to reposition idle drivers before peak times begin.

• App Notifications & Alerts
Inform riders and drivers in real time about expected demand surges to reduce cancellations and improve planning.