Optimizing Ride Request Service: A Data Analysis

Unveiling Trends and Insights for Improved Service Quality

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Introduction

Welcome to our data-driven journey through the world of ride requests. In this presentation, we'll delve into the intricate web of data to uncover trends, disparities, and opportunities within the realm of transportation services.
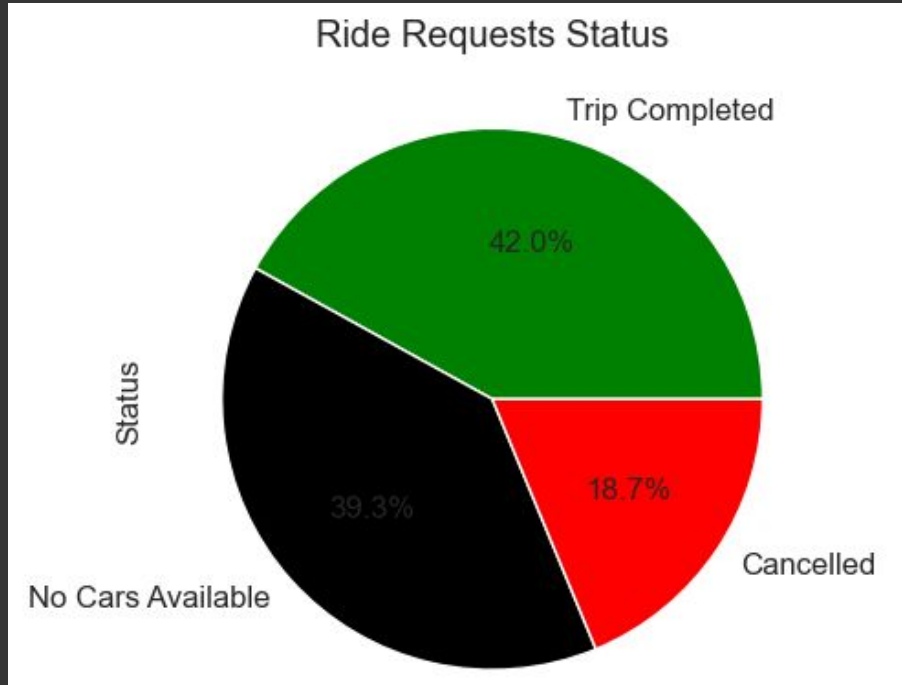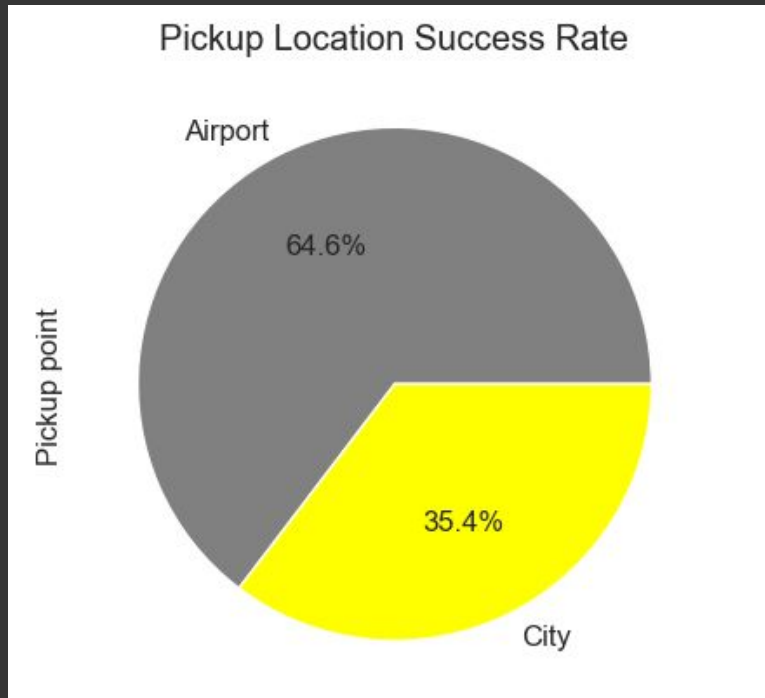
Objective

Our objective is to harness this data to enhance service quality and customer satisfaction. Join us as we explore the fascinating landscape of ride requests and discover how data analysis can drive optimization and excellence in our service.

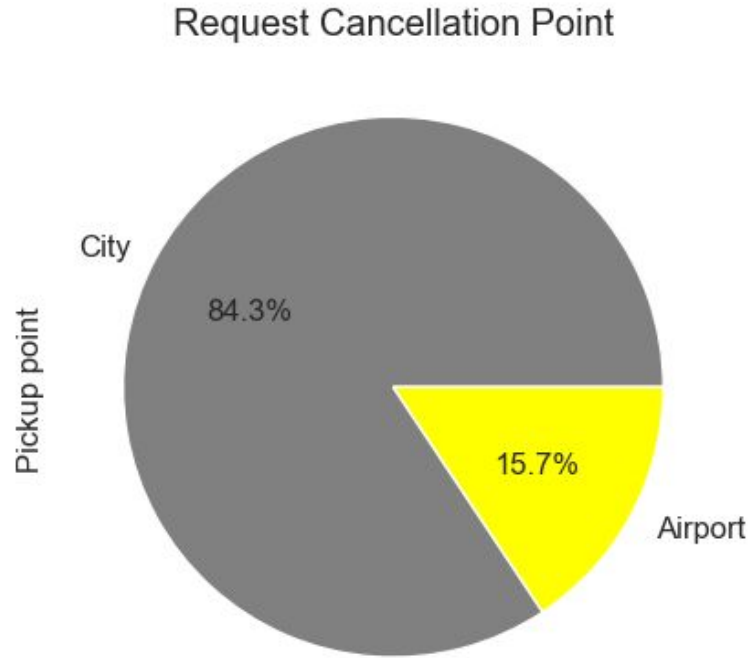# Ride Request Status Overview

- **Successfully Executed (41%)**
- **Non-initiation due to Unavailability (39.29%)**
- **Canceled (18.84%)**

Pickup Location Disparities

Pickup Location Success Rate

- **Airport (64.64%)**
- **City (35.35%)**

Request Cancellation Point

Pickup point

City 84.3%

15.7% Airport

Cancellation Discrepancies

- **City (84.35%)**
- **Airport (15.66%)**

Time Period Analysis

Demand-Supply distribution throughout the day
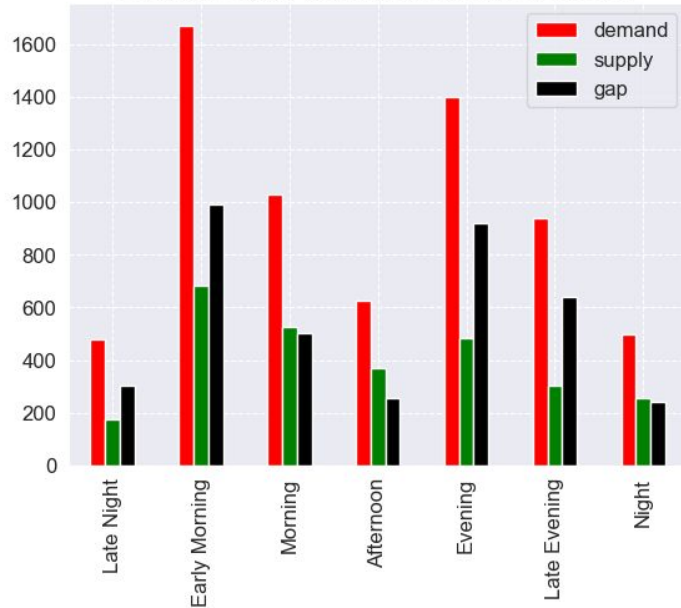
period	demand	gap	supply
Late Night	479	305	174
Early Morning	1672	991	681
Morning	1029	504	525
Afternoon	626	256	370
Evening	1401	920	481
Late Evening	941	638	303
Night	498	241	257

Time Period - Car Unavailability

Frequency of Ride Unavailabilty in Pickup Time Categories
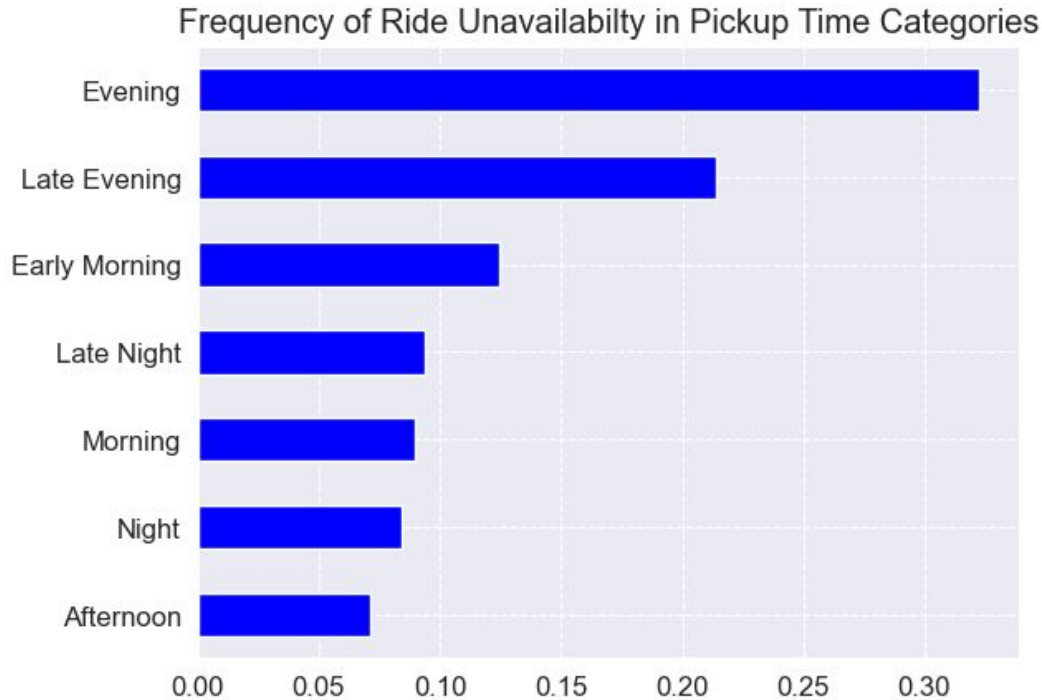
The Evening has the highest unavailability of ride.

Time Period - Canceled Requests

Early Mornings have the highest number of ride cancellations.
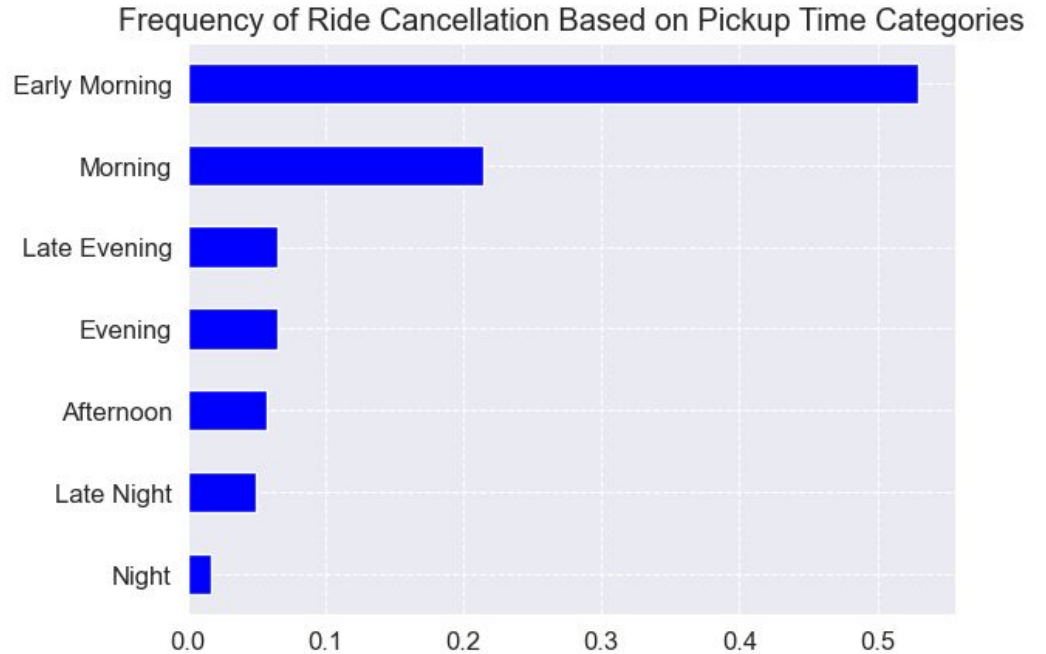

Frequency of Ride Cancellation Based on Pickup Time Categories

Demand-Supply Gap Overview

	Request id	Pickup point	Driver id	Status	Request timestamp	Drop timestamp	hour	period	demand	supply	gap
0	619	Airport	1.0	Trip Completed	2016-11-07 11:51:00	2016-11-07 13:00:00	11	Morning	1	1	0
1	867	Airport	1.0	Trip Completed	2016-11-07 17:57:00	2016-11-07 18:47:00	17	Evening	1	1	0
2	1807	City	1.0	Trip Completed	2016-12-07 09:17:00	2016-12-07 09:58:00	9	Morning	1	1	0
3	2532	Airport	1.0	Trip Completed	2016-12-07 21:08:00	2016-12-07 22:03:00	21	Late Evening	1	1	0
4	3112	City	1.0	Trip Completed	2016-07-13 08:33:16	2016-07-13 09:25:47	8	Early Morning	1	1	0

Strategic Recommendations

Evening Airport Fleet Augmentation:

Consider deploying additional vehicles near the airport during peak evening times to meet the high demand effectively.

Reallocation of City Cabs:

During high-demand periods, explore the option of reallocating some city-based cabs to the airport.

Time-Period-Specific Promotions:

Implement time-specific promotions and incentives to encourage riders and drivers during critical hours, such as early mornings and evenings.

Data-Driven Pricing:

Utilize data to implement dynamic pricing strategies that align with demand patterns.

Driver Incentive Programs:

Develop driver incentive programs that reward drivers for serving during challenging time periods.

Passenger Information Campaign:

Educate passengers about peak demand times and encourage them to schedule their rides in advance or during less congested periods.

Key Takeaways

➜ **Ride Request Status:**
A significant portion of ride requests face challenges, with only 41% successfully executed. Unavailability of vehicles and cancellations contribute to the service gap.

➜ **Location Disparities:**
Airport pickup points have a higher rate of unavailability issues, while the city experiences a greater number of cancellations.

➜ **Time Period Impact:**

Evenings are particularly challenging, with car unavailability issues being most pronounced. Early mornings witness high cancellation rates.

➜ **Demand-Supply Gap:**

A notable gap exists between demand and supply, with variations in different time periods and pickup locations.

Thank You