

**SYNOPSIS**



**Data Analysis Project**

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**Introduction:**

**Ola**, a national leader in the ride-hailing industry, provides valuable data related to its services, user behaviour, driver performance, trip details, and more. This dashboard analyses this data to uncover key insights that can aid businesses in making data-driven decisions. In this analysis, we focus on three core areas: **ride performance**, **driver performance**, and **Vehicle performance**. By examining important metrics such as trip completion rates, ratings, earnings, user engagement, and geographic trends, the goal is to identify patterns that can enhance operational efficiency, improve driver satisfaction, optimize pricing strategies, and foster better customer experiences. Through these insights, Ola can refine its business model and service offerings, ensuring more efficient and targeted growth in various markets.

**Objectives:**

* **Data-Driven Decision Making:** Provide insights to inform strategic business decisions.
* **Overall Performance Assessment:** Evaluate Ola’s overall performance across key metrics.
* **Customer (User)Behaviour Assessment:** Evaluate customer acquisition, churn, and engagement.
* **Customer Insight**: Assess customer satisfaction through average ratings and feedback to identify areas for service improvement.

**Methodology:**

The development of the dashboard involved the following steps:

* **Data Collection**: Rides data was aggregated from Ola’s records, encompassing details such as date, booking id, status, vehicle type, pickup, drop locations, price and customer ratings.
* **Data Cleaning and Transformation**: The collected data underwent cleaning to handle missing values and inconsistencies. Transformation processes were applied to structure the data appropriately for analysis.
* **Data Modelling**: A data model was constructed to define relationships between different data entities, facilitating efficient querying and analysis.
* **Dashboard Development**: Using Power BI, an interactive and responsive dashboard was created, incorporating various visualizations to represent the analyzed data effectively.

**Using ChatGPT Prompt to Create Data.**

**Please create a spreadsheet with 1 lakh rows, for Bengaluru city. Give the following columns. The data will be for December 2024. use the following column -**

1. Date
2. Time
3. Booking ID
4. Booking Status
5. Customer ID
6. Vehicle Type
   * Auto
   * Prime Plus
   * Prime Sedan
   * Mini
   * Bike
   * eBike
   * Prime SUV
7. Pickup Location (Create dummy location points Take any 50 areas from Bangalore)
8. Drop Location (Take from dummy pickup locations)
9. Avg VTAT (Time taken to arrive at the vehicle)
10. Avg CTAT (Time taken to arrive the Customer)
11. Cancelled Rides by Customer
12. Reason for cancelling by Customer

* Driver is not moving towards pickup location
* Driver asked to cancel
* AC is not working (Only for 4-wheelers)
* Change of plans
* Wrong Address

1. Cancelled Rides by Driver

* Personal & Car related issues
* Customer related issue
* The customer was coughing/sick
* More than permitted people in there

1. Incomplete Rides
2. Incomplete Rides Reason

* Customer Demand
* Vehicle Breakdown
* Other Issue

1. Booking Value
2. Ride Distance
3. Driver Ratings
4. Customer Rating

**CONSTRAINTS:**

* Keep the overall booking status success for this data at 62%. If the booking status is successful, then only fare charge ratings, average VTAT, average CTAT, and other data will be there.
* Make sure orders cancelled by customers should not be more than 7%
* Make sure orders cancelled drivers should not be more than 18%
* Increase the number of orders on weekends and match days. Keep match day by using the following dates
* keep incomplete rides less than 6%
* Keep order value high on weekends.

**Business Questions:**

1. Ride Volume Over Time
2. Booking Status Breakdown
3. Top 5 Vehicle Types by Ride Distance
4. Average Customer Ratings by Vehicle Type
5. cancelled Rides Reasons
6. Revenue by Payment Method
7. Top 5 Customers by Total Booking Value
8. Ride Distance Distribution Per Day
9. Driver Ratings Distribution
10. Customer vs. Driver Ratings

**Analysis:**

* 1. **Overall -**

**Ride Volume Over Time** - A time-series chart showing the number of rides per day/week.

**Booking Status Breakdown** - A pie or doughnut chart displaying the proportion of different booking statuses (success, cancelled by the customer, cancelled by the driver, etc.).

* 1. **Vehicle Type -**

**Top 5 Vehicle Types by Ride Distance** - A bar chart ranking vehicle types based on the total distance covered.

* 1. **Revenue -**

**Revenue by Payment Method** - A stacked bar chart displaying total revenue based on payment methods (Cash, UPI, Credit Card, etc.).

**Top 5 Customers by Total Booking Value** - A leaderboard visual listing customers who have spent the most on bookings.

**Ride Distance Distribution Per Day** - A scatter plot showing the distribution of ride distances for different Dates.

* 1. **Cancellation -**

**Cancelled Rides Reasons (Customer) and cancelled Rides Reasons (Drivers)-**

A bar chart that highlights the common reasons for ride cancellations by customers and drivers.

* 1. **Ratings -**

**Average Customer Ratings by Vehicle Type:** A column chart showing the average customer ratings for different vehicle types and Driver and Customer Ratings.

**Key Findings:**

* **Booking Status Breakdown**: More than 60% of bookings were successful, rest 40% were cancelled by either customers or drivers or drivers not found.
* **Customer Satisfaction**: An average rating of 4.1 out of 5 suggests a generally positive customer experience, with room for improvement.
* **Overall Performance**: Out of 103k bookings 64k bookings were successful and generated 35M revenue and had a severe loss of 21M due to ride cancellations.
* **Payment**: Most people preferred payment method is using cash or UPI, only few make card payment.
* **Vehicle types**: Prime Sedan and ebike are the most booked vehicle.
* **Ride Cancellation**: 29k rides were cancelled out of 103k which is around 28%.

The Major reason for cancellation from drivers is:

* Personal and car related issue is 35%.
* Customer related issue is 30%.

The Major reason for cancellation from Customers is:

* Issue of Driver is not Moving is 30%.
* Issue of Driver asked to cancel is 25%.

**SYSTEM CONFIGURATION**

**Software Requirements:**

**o Operating System:** Windows/Linux/MacOS

**o Data Storage and Management:** Microsoft Excel

**o Data Analysis and Visualization:** Power BI

**Hardware Requirements:**

**o Processor:** Multi-core processor

**o Memory:** Minimum 8 GB RAM

**o Storage:** 256 GB and above

**Implications:**

* **Optimized Fleet Management:** Insights into ride patterns and driver performance can help manage fleet resources more efficiently, reducing wait times and improving service availability.
* **Dynamic Pricing Strategies:** Real-time data enables Ola to implement flexible pricing models based on demand, improving both profitability and customer satisfaction.
* **Enhanced Customer Experience:** By focusing on customer feedback and satisfaction trends, Ola can fine-tune its services to provide a better user and driver experience.
* **Reduced Ride Cancellations:** Analyzing cancellation patterns can help Ola identify common causes for cancellations (e.g., long wait times, driver behaviour, or pricing) and implement strategies to reduce them, improving both customer retention and driver efficiency.

**Conclusions:**

The in-depth analysis of Ola dashboard provides key insights into ride frequency, driver performance, and regional demand trends. This enables informed decisions on service optimization, pricing, and fleet management. By identifying emerging patterns, Ola can enhance both rider and driver experiences. Power BI’s interactive dashboards allow for real-time tracking, supporting agile decision-making. These insights help improve operational efficiency and customer satisfaction. Ultimately, the analysis drives strategic adjustments to ensure sustainable growth and a competitive market position.