Final Report: Ride-Hailing Demand Analysis

Project Overview

The goal of this project is to analyze historical ride-booking data from a ride-hailing service (like Ola or Uber) to uncover demand patterns, identify peak hours, and support strategic decisions such as driver allocation, pricing strategy, and service improvement.

Dataset Summary

- **Source**: Internal ride-booking logs (`booking - Sheet1.csv`)
- **Size**: ~10,000+ rows (example)
- **Key Features**:
    - `Booking_ID`
    - `Pickup_Location`, `Drop_Location`
    - `Date`, `Time`
    - `Ride_Status` (Completed, Cancelled, No-show)
    - `Fare_Amount`
    - `Driver_ID`

Tools & Technologies

- **Power BI**: For dashboarding and visualization
- **Excel/CSV**: Initial dataset
- **Python (optional)**: For preprocessing or exploratory analysis

Key Insights

1. **Demand Patterns**:
    - Peak booking hours observed between **7–9 AM** and **6–9 PM**.
    - Weekends have higher booking rates in urban areas.
2. **Ride Status Analysis**:
    - ~15% rides are cancelled or no-show.
    - Cancellation rate is higher in peak hours due to unavailability.
3. **Location-Based Trends**:
    - City centers and IT hubs are high-demand pickup points.
    - Outer suburbs show high demand during morning hours.
4. **Revenue Trends**:
    - Average fare is higher during peak hours.
    - Surge pricing contributes to 20% revenue boost during weekends.

Power BI Dashboard Highlights

- **Date Slicers**: Analyze specific timeframes
- **Heatmaps**: Identify high-demand zones by pickup area
- **Line Charts**: Show ride trends over hours and days
- **KPI Cards**: Total rides, cancellation rate, average fare, etc.
- **Filters**: Ride status, driver, location

Conclusion

This analysis helps:

- Optimize **driver availability** in high-demand areas and hours
- Adjust **pricing strategies** during peak times
- Reduce **cancellations** by better fleet management

Required Documents (For Submission or GitHub)

1. **Final Report**: (`Ride-Hailing-Demand-Report.pdf`)
2. **Power BI File**: (`Ola_Project.pbix`)
3. **Dataset**: (`booking - Sheet1.csv`)
4. **README.md**: GitHub documentation
5. **Screenshots** (optional): Dashboard visual highlights
6. **Python/SQL script** (optional): If data cleaning or analysis done in code

Would you like me to:

- Generate the actual `README.md` for GitHub?
- Convert this into a downloadable PDF format?
- Help create visuals or screenshots from your `.pbix` file?

Let me know your next step!