

# *Indian railway analytics*

## REPORT AND DASHBOARD

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# Railway Ticket Booking Analysis Project Report

## 1. Project Overview

This project analyzes Indian Railway ticket booking data to uncover insights about travel trends, booking behaviors, confirmation status, and more. The project includes data cleaning, exploratory data analysis (EDA), visualization, and reporting, with a special focus on Superfast trains and seasonal demand.

## 2. Objectives

- Understand booking trends over time
- Analyze class, quota, and channel preferences
- Study confirmation rates and influencing factors
- Visualize travel distance vs. time, especially for Superfast trains

## 3. Tools & Technologies

- Python (Pandas, Matplotlib, Seaborn)
- Jupyter Notebook
- FPDF for PDF reporting
- Power BI-style dashboarding
- GitHub for version control

## 4. Key Findings

- Most bookings occur in March and December
- Sleeper and 3AC are the most used classes
- Tatkal and General quotas dominate bookings
- Booking via online channels is most popular
- Confirmation rate is higher for lower travel time and distance
- Superfast trains have a consistent speed-distance relationship

## 5. Files Included

- `README.md`: Project overview, instructions, and insights

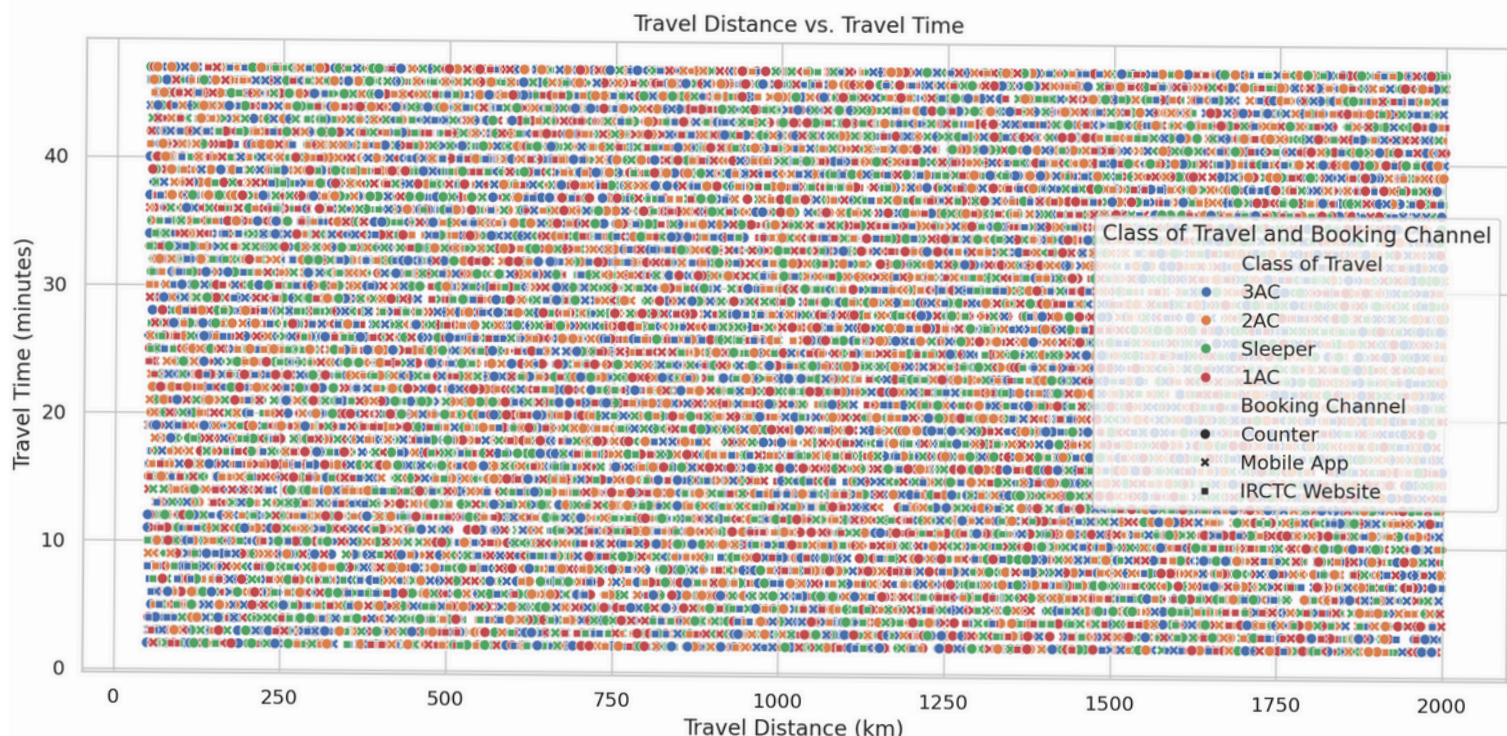
# Railway Ticket Booking Analysis Project Report

- `notebooks/EDA.ipynb`: Full data analysis notebook
- `outputs/`: Contains all generated charts and visualizations
- `dashboard/`: Power BI or Streamlit dashboard (optional)
- `Railway\_Booking\_Dashboard\_Report.pdf`: Main visual report

## 6. Conclusion

This end-to-end project demonstrates real-world data analysis using a practical dataset. By applying data cleaning, visualization, and reporting techniques, it uncovers actionable insights into how railway bookings behave over time, across classes and quotas. This project is ideal for showcasing data analyst skills on GitHub.

## SCATTER PLOT:



# RAILWAY BOOKING KPI

Total Bookings

Confirmed Tickets

Avg Travel Distance

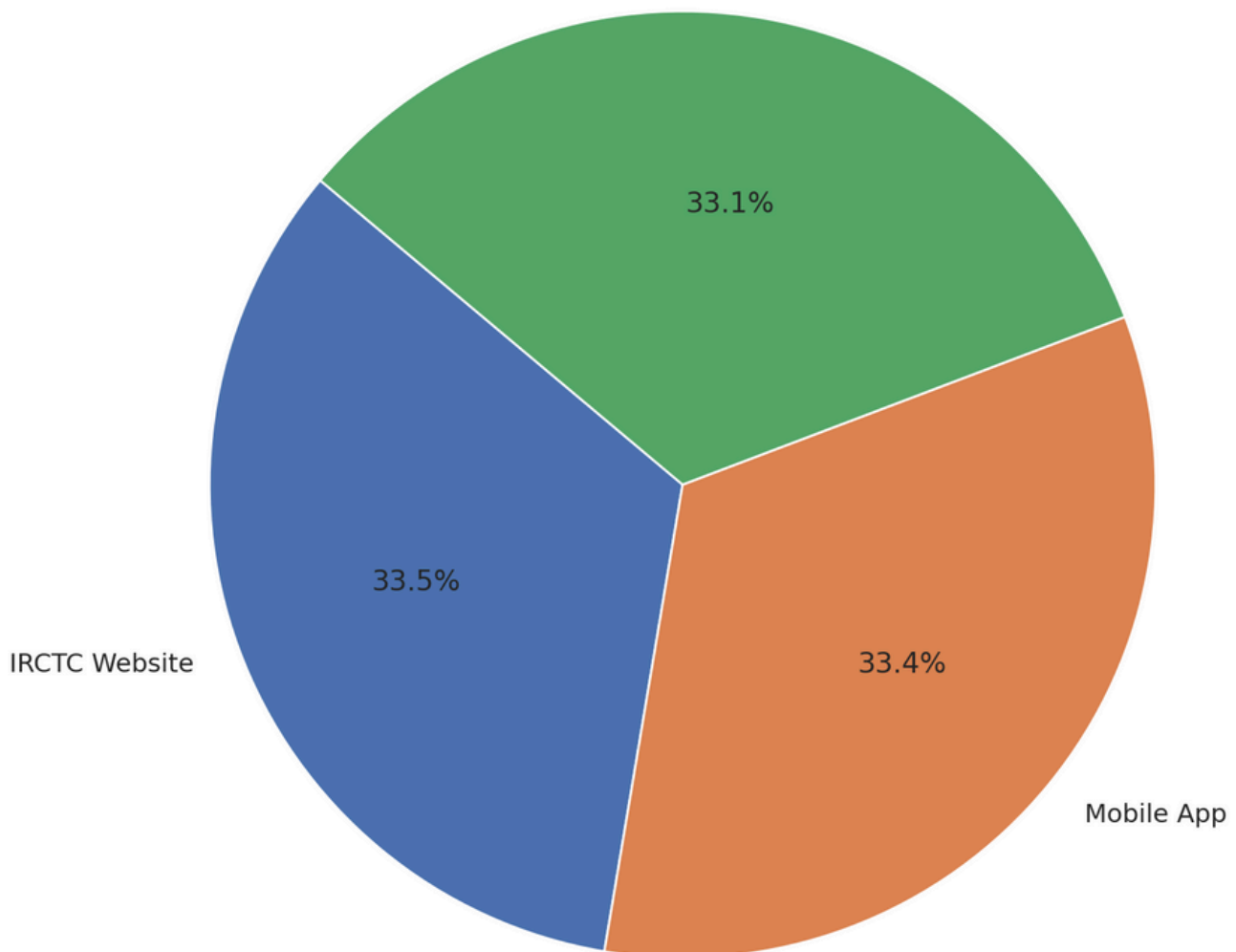
30,000

66.5%

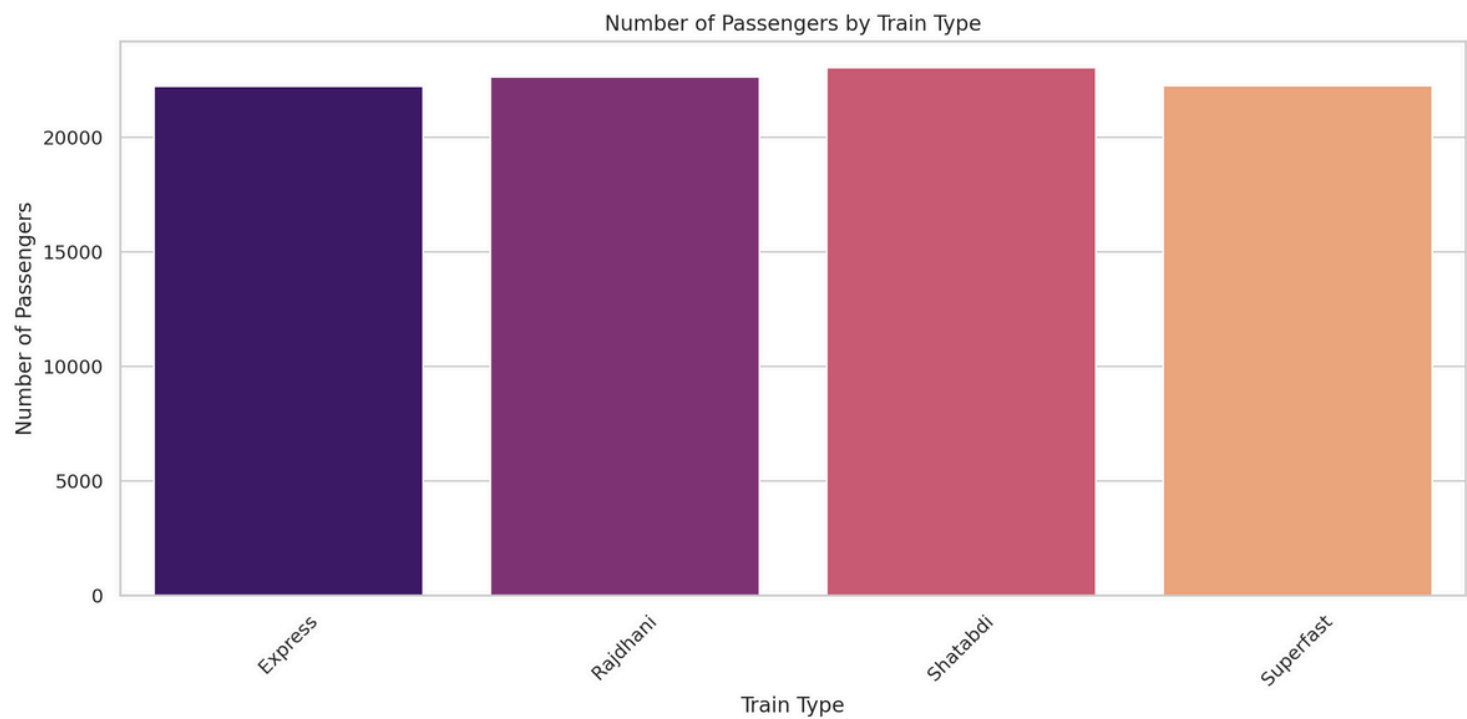
1022.6 km

## PIE CHART OF ANALYTICS:

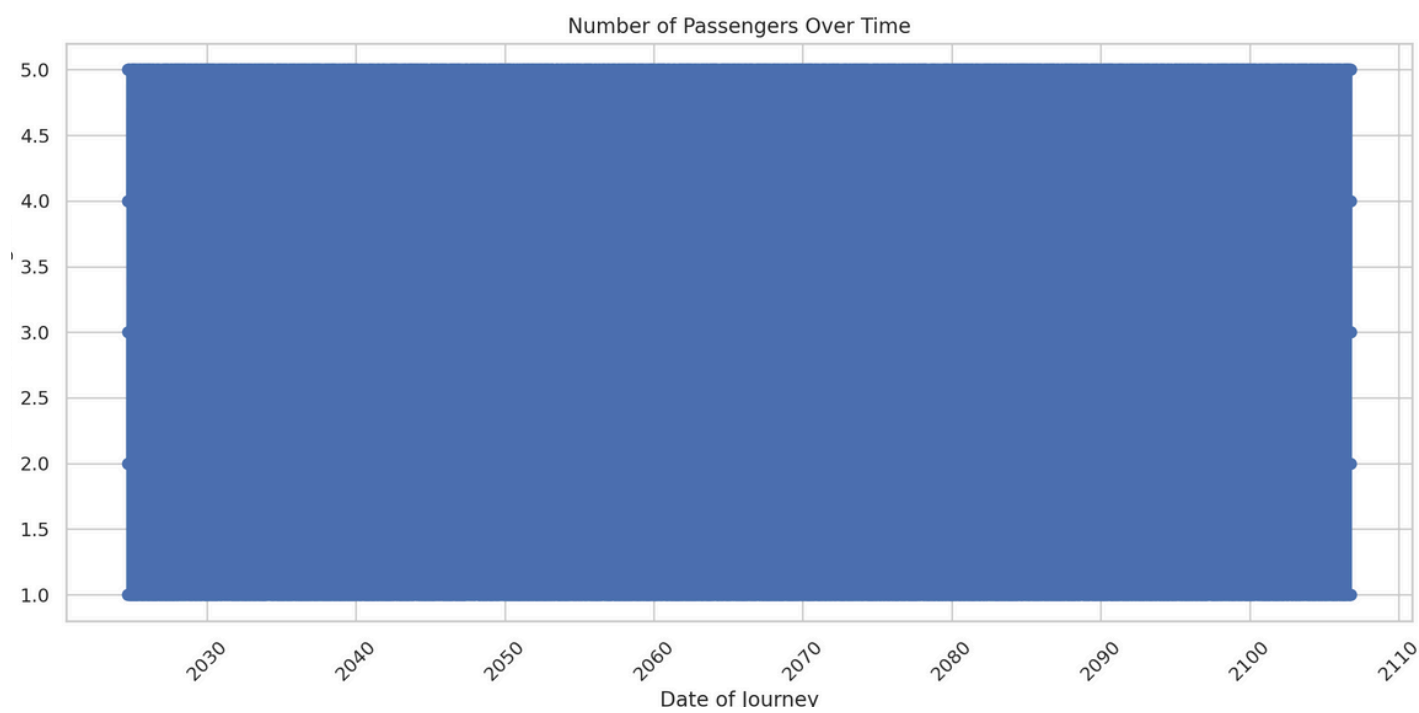
Distribution of Booking Channels  
Counter



**BAR OF LINE CHART:**

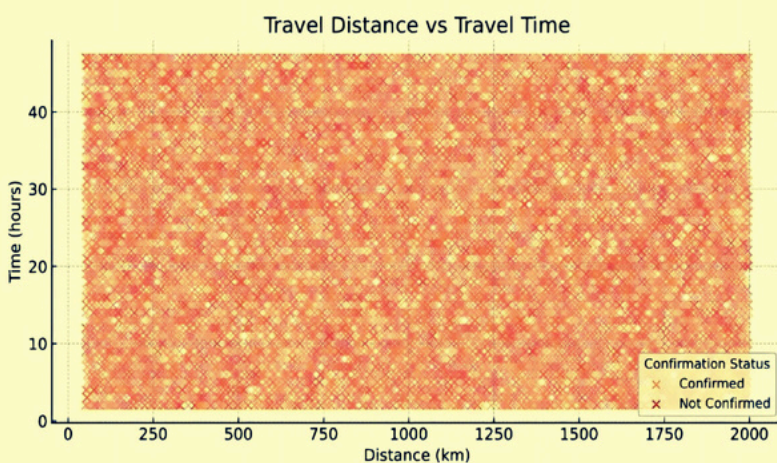
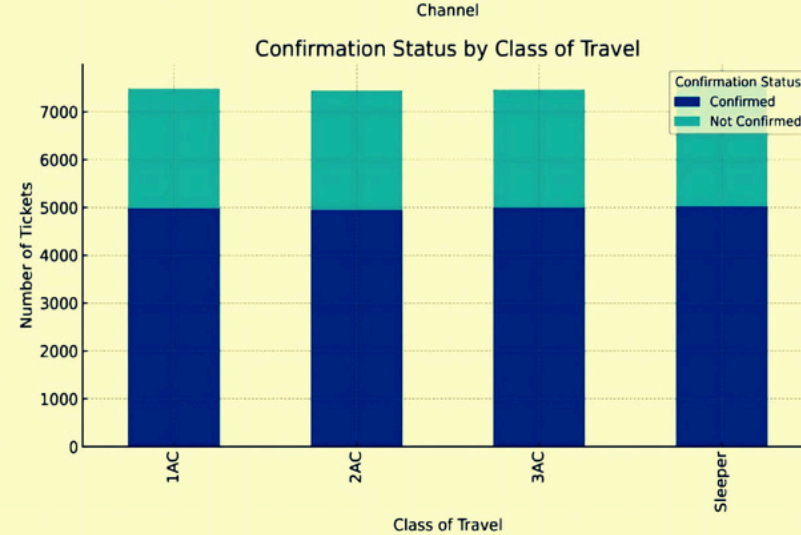
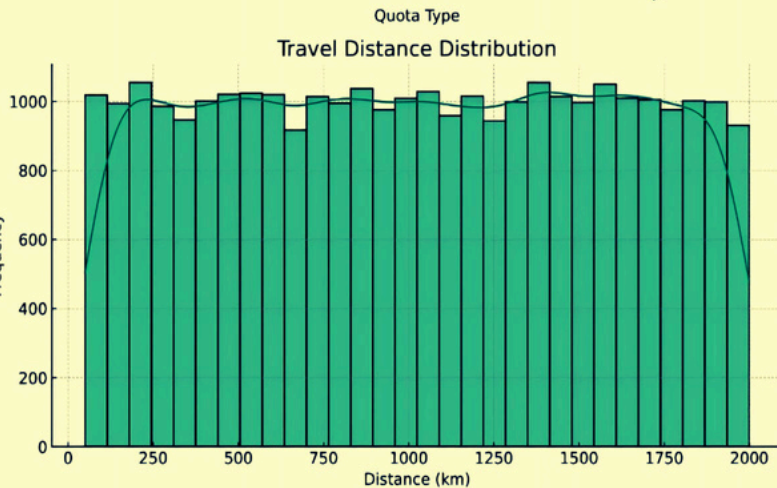
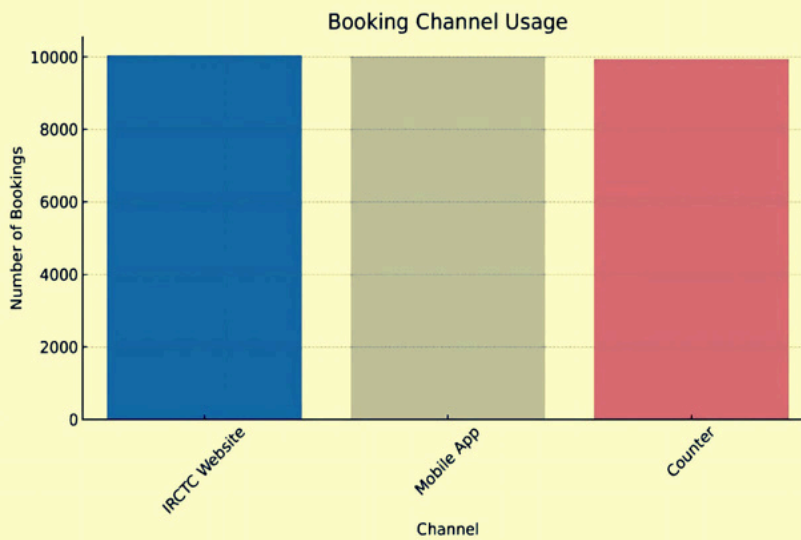
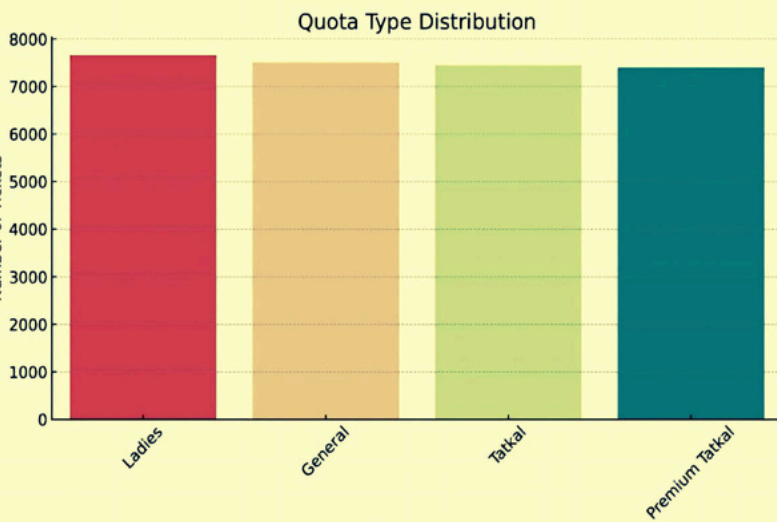
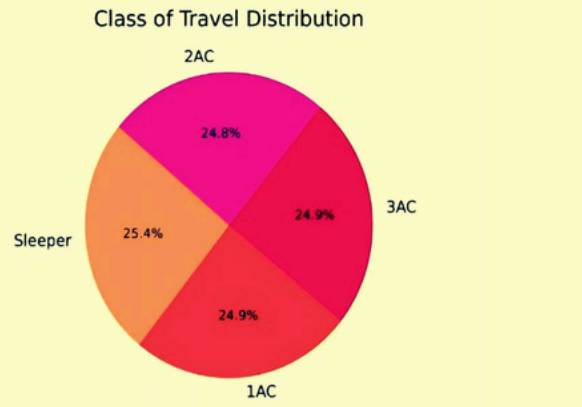
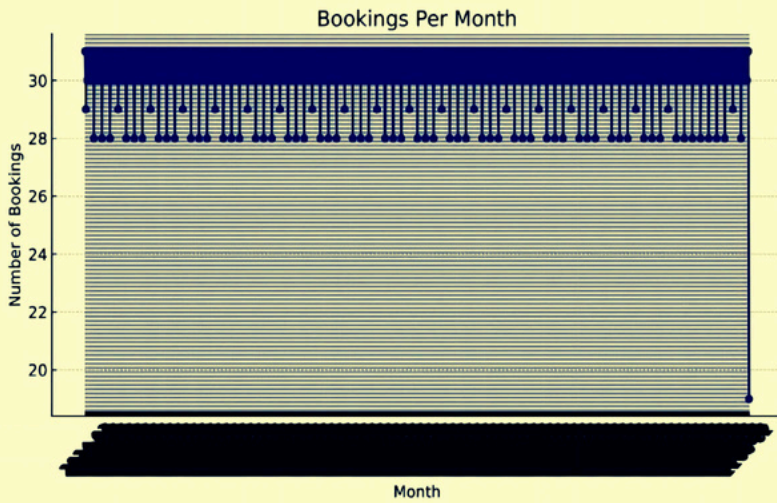


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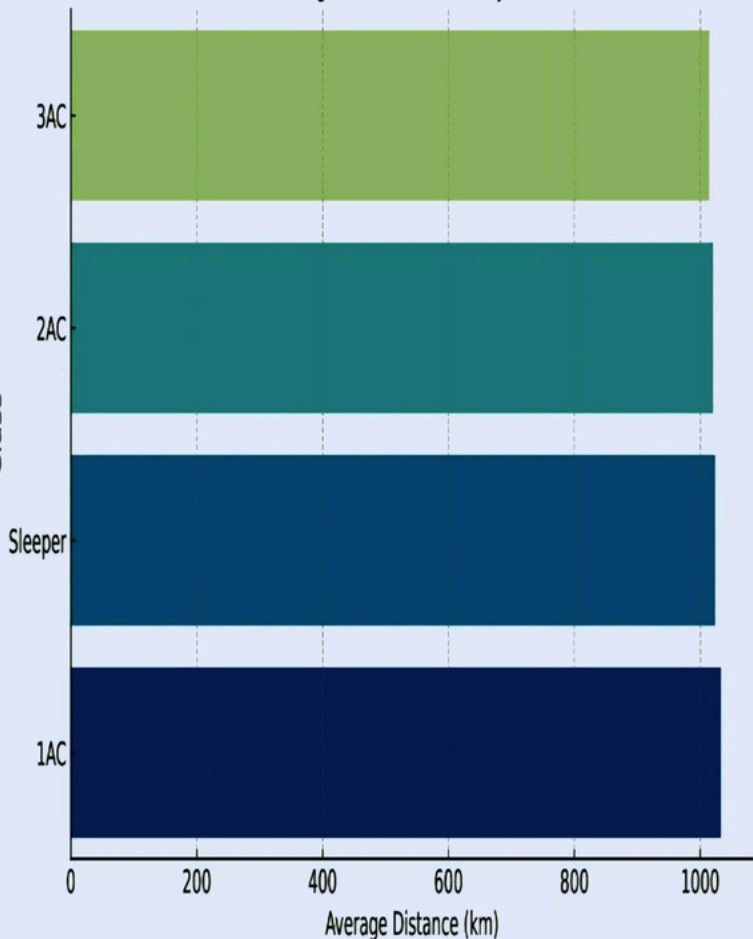


## Railway Ticket Booking & Schedule Dashboard Report

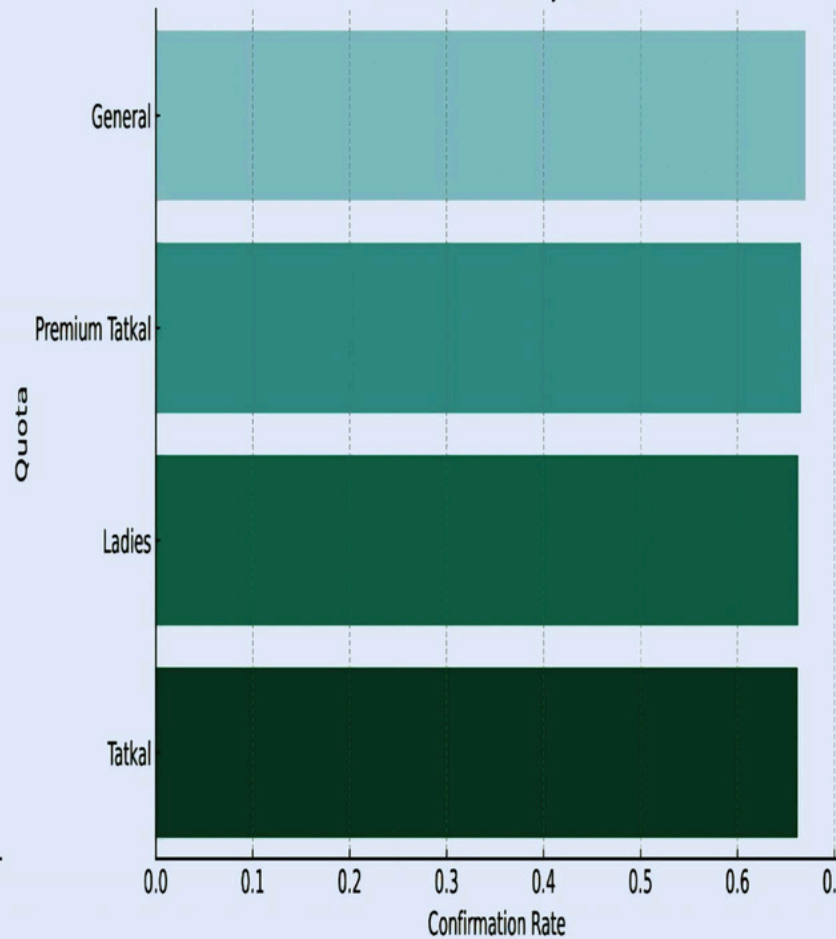


# Insights & Summary - Railway Ticket Dashboard

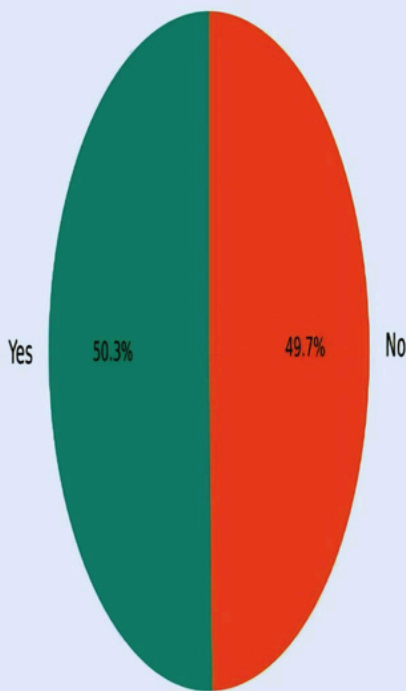
## Average Travel Distance by Class



## Confirmation Rate by Quota



## Booking Distribution: Peak vs Non-Peak Season



## Superfast Trains: Distance vs Time

