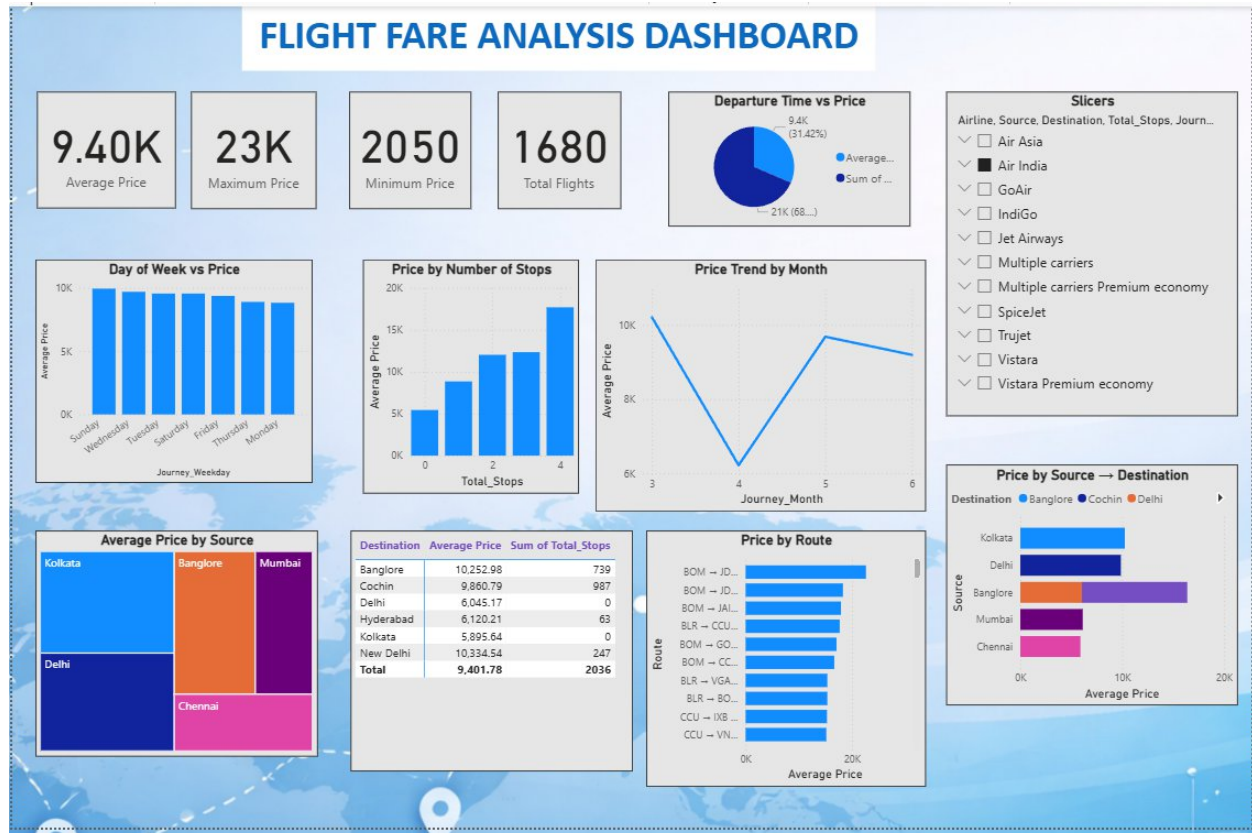


Project Title: FLIGHT FARE ANALYSIS AND PRICE PREDICTION

Dashboard:



Summary:

1. The Flight Fare Analysis Dashboard presents insights from **1,680 flights**, with an **average ticket price of ₹9.40K**, a **minimum of ₹2,050**, and a **maximum of ₹23K**.
2. Flight prices vary noticeably based on **day of the week**, **number of stops**, **route**, and **month of travel**.
3. The dashboard highlights strong price differences across **sources (cities)**, **destinations**, and **airlines**.
4. Routes with **more stops** generally show **higher average fares** compared to non-stop flights.
5. Monthly trends indicate **significant fluctuations in airfare**, showing that timing plays a major role in pricing.

Key Insights

❖ Trend Analysis

- **Price by Month:**

Prices drop sharply around **Month 4**, then rise again in **Month 5 and 6**, showing a **seasonal pricing pattern**.

- **Price by Stops:**

Ticket prices increase as the **number of stops increases**.

- 0 stops \approx lowest price
- 4 stops \approx highest price

- **Day of Week vs Price:**

Prices are **highest on Sunday and Wednesday** and slightly lower on **Monday and Thursday**, indicating weekday variation.

❖ Correlation Analysis

- **Stops vs Price:**

There is a **positive correlation** between number of stops and average ticket price.

- **Source/Destination vs Price:**

Certain routes (e.g., **BOM \rightarrow JD, BOM \rightarrow DEL, BLR \rightarrow CCU**) consistently show **higher average prices**, proving that **route selection strongly influences fare**.

- **Source City vs Price:**

Flights originating from **Bangalore and Kolkata** tend to have **higher average fares** compared to Chennai and Delhi.

❖ Anomaly Detection

- The **maximum price (₹23K)** is much higher than the **average price (₹9.40K)**, indicating the presence of **premium or peak-time flights**.
- Some routes show **unusually high prices** compared to others, suggesting **route-specific demand or limited availability**.
- Month 4 shows an **abnormal price dip**, standing out clearly from other months.

Recommendations:

- **Travelers should prefer non-stop or 1-stop flights** to minimize ticket cost, as price increases with more stops.
- **Booking in Month 4** can help travelers secure cheaper fares due to the observed price dip.
- Routes with consistently high fares should be **monitored for dynamic pricing strategies** or targeted discounts.
- Airlines can use this analysis to **optimize pricing based on route demand and seasonal trends**.
- Travel platforms can implement **price prediction models** using features like stops, month, route, and weekday to suggest cheaper alternatives.

Final Story from the Dashboard:

- This dashboard tells the story of how flight ticket prices are shaped by **time, route, and travel structure**.
Although the average airfare is around **₹9.40K**, prices can surge up to **₹23K**, mainly influenced by **route selection and number of stops**.
- A clear seasonal pattern emerges, where prices **dip sharply in Month 4** and rise again afterward.
Flights with **more stops consistently cost more**, and certain routes dominate the high-price segment, proving that not all journeys are priced equally.
- Overall, the analysis shows that **smart route selection and timing** can significantly reduce travel costs, while airlines can leverage these patterns to improve **pricing strategies and demand forecasting**.