


An aerial photograph of a white commercial airplane on a grey runway. The plane is angled towards the bottom left. Yellow lines are painted on the runway surface. A large, dark, semi-transparent rectangular area covers the left side of the image, serving as a background for the text. A small red rectangle is located in the top left corner of the dark area.

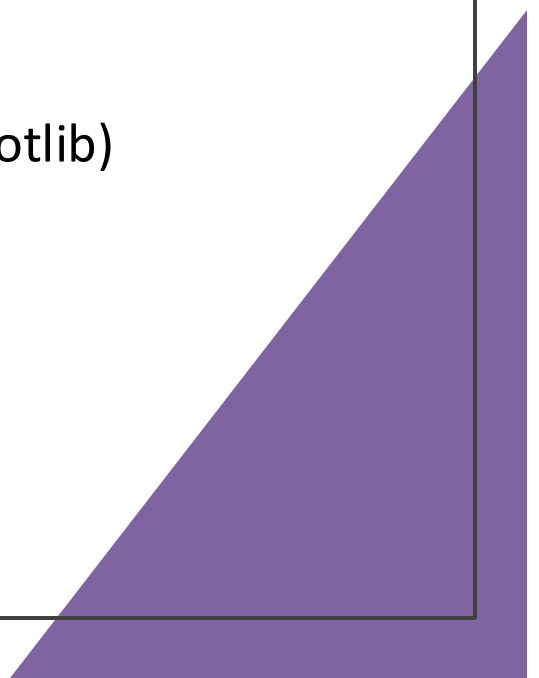
Airlines Flights Data Analysis

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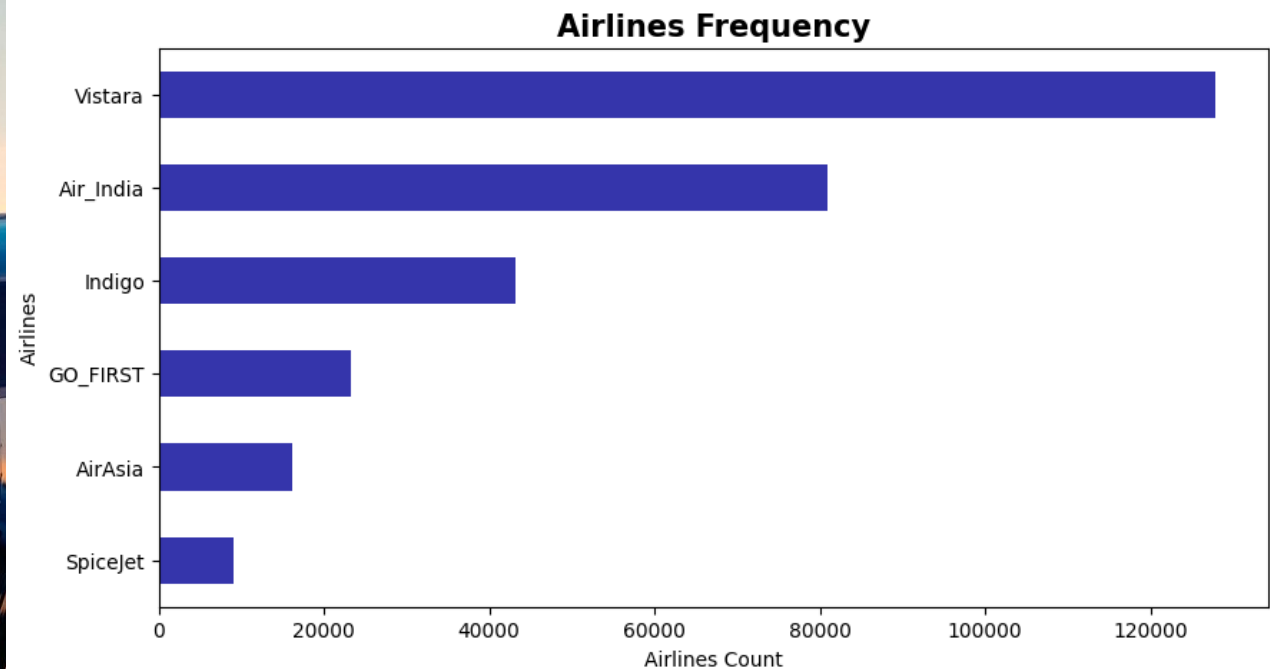
Introduction & Objective

- **Objective:** Analyze airline flight data to uncover trends in flight frequency, delays, and Price variation.
 - **Outcome:** Provide actionable insights for airline stakeholders.
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- A decorative purple dashed line in the bottom right corner, consisting of several curved segments.

Dataset Overview

- Indian domestic flights dataset
 - Includes airline names, departure/arrival delays, Price variation
 - Tools used: Python (Pandas, Seaborn, Matplotlib)
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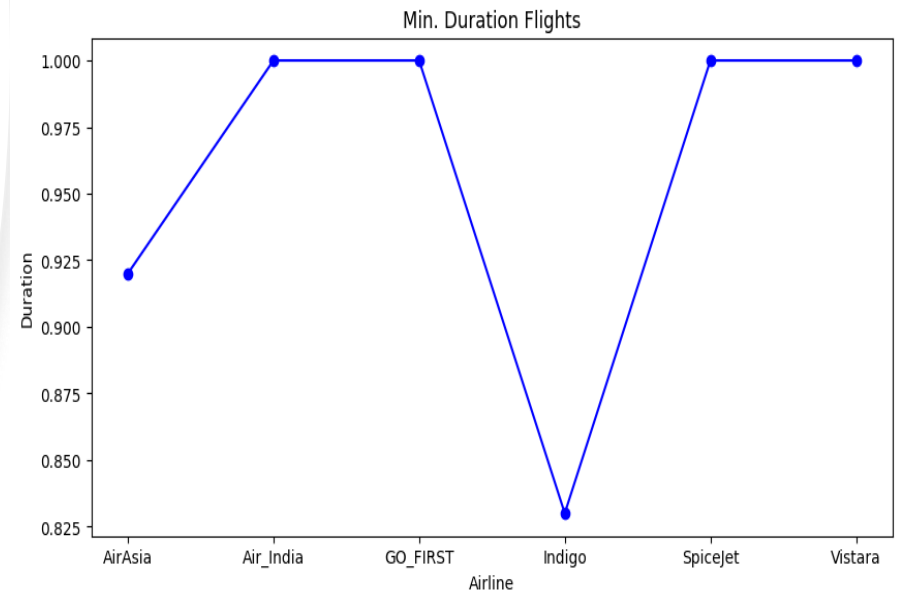
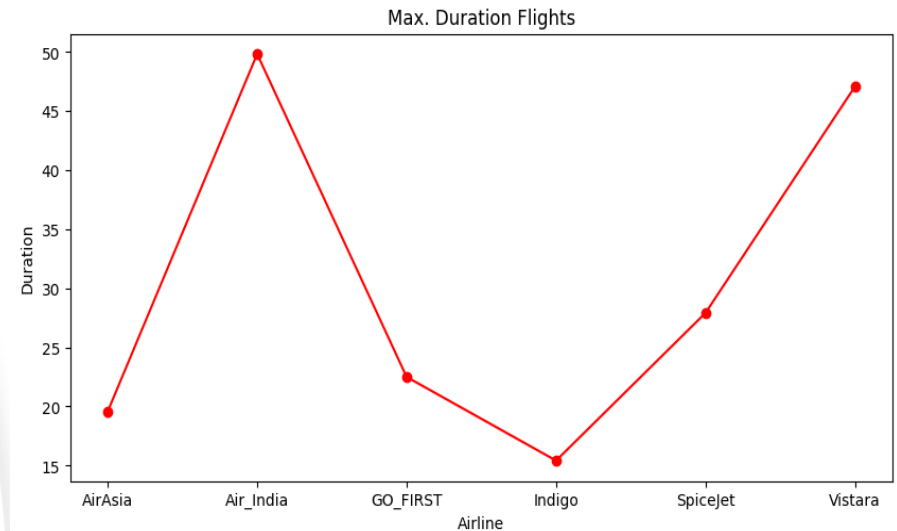
Top 3 Airlines by Flight Frequency



- Top 3 Airlines with the highest number of flights:
- Vistara 127859
- Air India 80892
- Indigo 43120

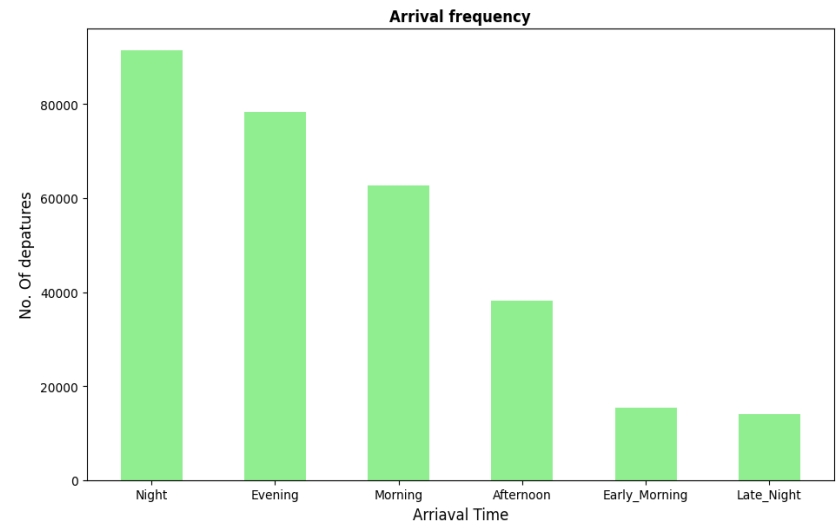
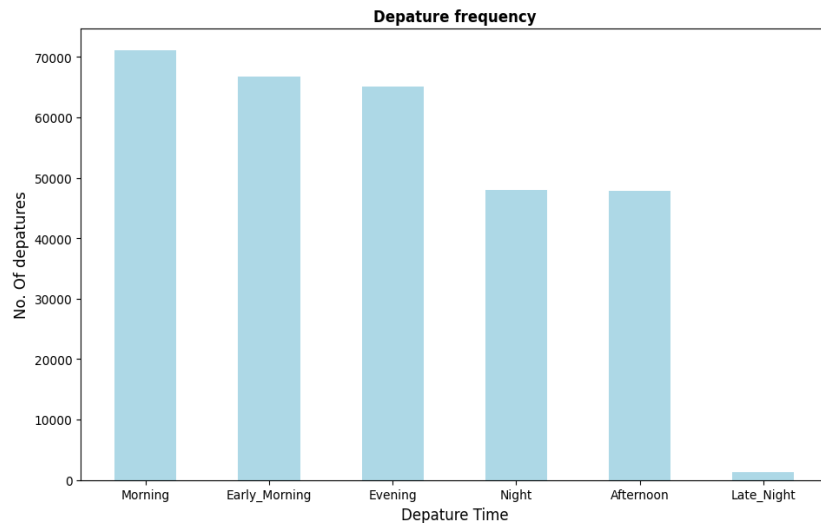
Flight Duration Insights

- For maximum duration flights, Air India and Vistara lead the chart.
- In the case of minimum duration flights, Air India ranks first, followed by SpiceJet and Vistara.
- Overall, Air India maintains the top position across both maximum and minimum duration categories, with Vistara closely behind.
- IndiGo, on the other hand, records the lowest durations in both segments.



Departure & Arrival frequency insights

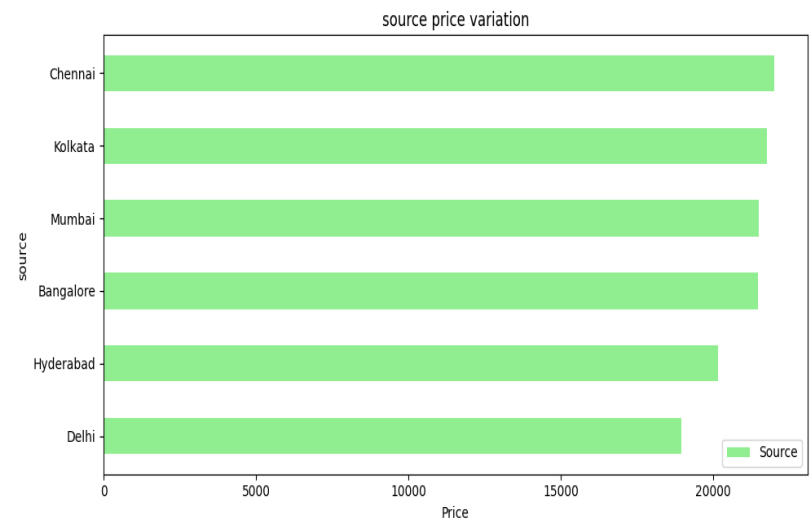
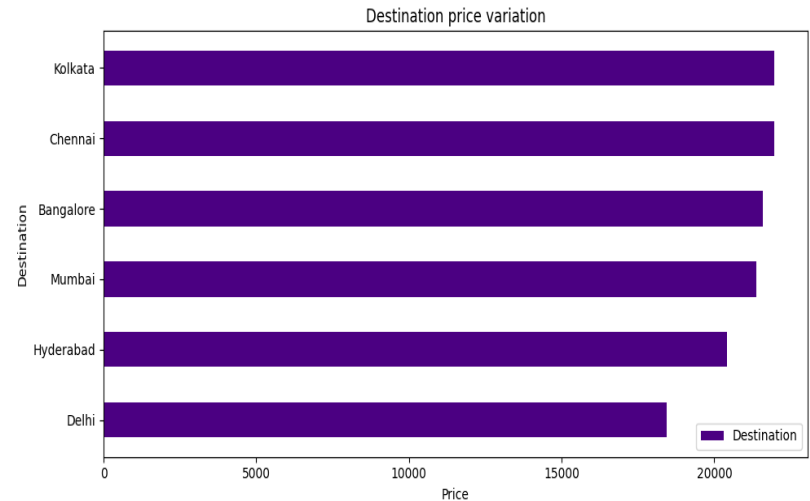
Depature & Arrival frequency



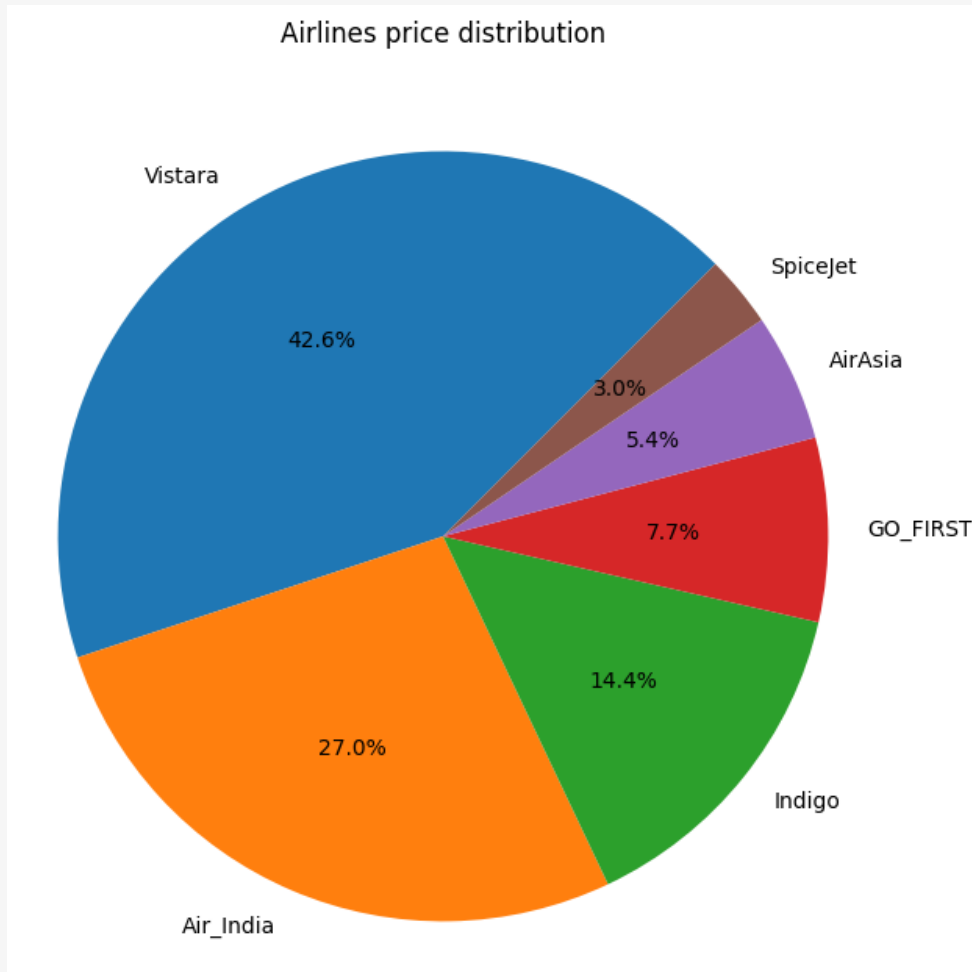
- **Departures:** Flights are most frequent in the morning and early morning. Departures drop significantly in the afternoon and late at night.
- **Arrivals:** Arrivals peak at night and in the evening, with fewer arrivals in the early morning and late-night periods.

Price Variations Analysis

- **By Source and Destination:** Cities like Delhi and Mumbai consistently appear at the higher end of price distributions, indicating these are premium or high-demand routes.
- **Source/Destination Dynamics:** Price trends are quite similar for sources and destinations, reflecting symmetrical market demand



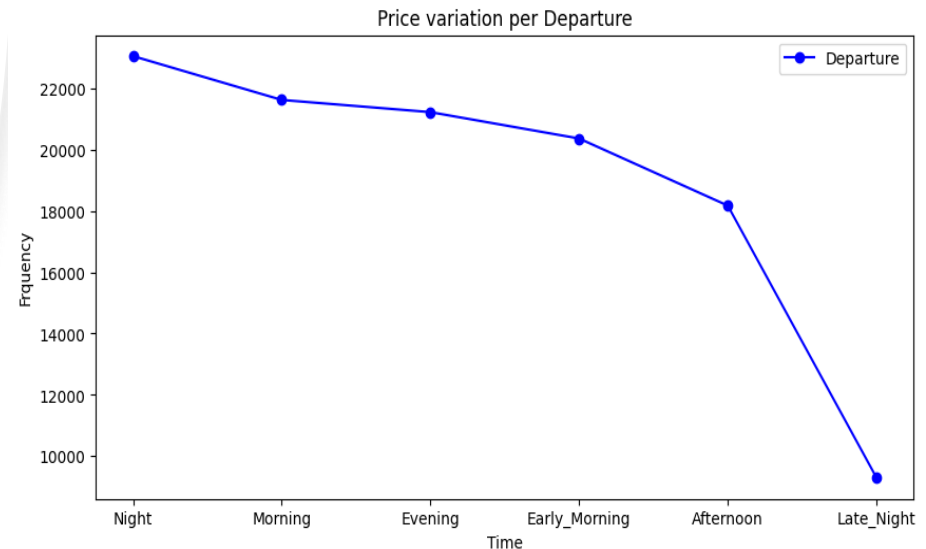
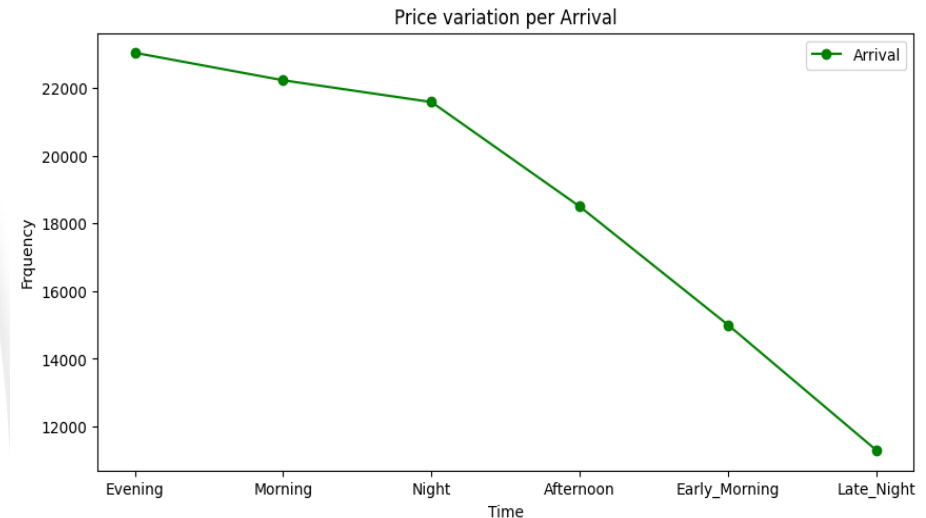
Airline Price Distribution



- **Market Leaders:** Vistara and Indigo together account for approximately 57% of the airline pricing distribution, highlighting their market dominance. SpiceJet, GO_FIRST, AirAsia, and Air India together fill the rest, with Air India's lower market share possibly linked to fewer high-demand routes or competitive pricing.
- **Price Sensitivity:** Vistara commands a higher average price, possibly correlating with a premium service offering

Price Variation by Time of Day

- **Arrival Times:**
 - Evening and Morning arrivals exhibit higher price points, potentially reflecting peak
 - travel preferences for business and leisure travelers.
- **Departure Times:**
 - Night and Morning departures fetch higher prices.
 - Late Night and Afternoon slots are less expensive, suggesting lower demand or
 - strategic discounting.





Thank you