flyzy

Factors Affecting Flight Ticket Prices

Agenda

1. Introduction and aim of project

2. Data Analysis Methodology

3. Insights and Findings

4. Recommendations for Pricing Strategies

5. Implications and Impact

6. Conclusion and Recommendations

Introduction

Our project aims to analyze the key factors influencing flight ticket prices. By considering variables such as flight duration, number of stops, class, airline, and departure time, we seek to gain valuable insights into the airline industry's pricing dynamics. This analysis will enable us to make informed recommendations to streamline travel, improve pricing strategies, and enhance the overall passenger experience. With a focus on simplifying travel and offering personalized experiences, our goal is to revolutionize the industry by providing hassle-free journeys and tailored pricing options.

Data Analysis Methodology

Dataset :

- Overview of the Dataset:

Comprehensive collection of flight data from multiple airlines.

Includes vital information such as airline names, flight numbers, source and destination cities, departure and arrival times, flight durations, number of stops, ticket prices, and class categories.

- Data Sources and Reliability:

Sourced from reliable and reputable industry sources.

Ensured data integrity and accuracy through rigorous quality control processes and validations.

- Scope and Timeframe:

Represents a specific timeframe capturing a range of flights.

Encompasses various airlines, routes, and class categories.

Provides a comprehensive view of the aviation landscape during the specified timeframe.

Data Analysis Approach:

Data Analysis Approach:

- Overview of the Methodology:

 - A systematic approach was employed to analyze the dataset and derive meaningful insights.

 - The methodology involved a combination of exploratory data analysis (EDA) and advanced analytical techniques.

- Steps in the Data Analysis Process:

 Data Preparation:

 - Cleaning and preprocessing the dataset to ensure data quality and consistency.

 - Handling missing values, outliers, and data inconsistencies.

Exploratory Data Analysis (EDA):

- Conducting descriptive statistics, data visualization, and summary analysis to gain initial insights into the dataset.

- Identifying patterns, trends, and correlations among variables.

Feature Engineering and Transformation:

- Creating new variables or transforming existing variables to enhance the analysis.

- Feature selection to focus on relevant variables for modeling.

Variables Considered:

Key Variables:

- Flight duration
- Number of stops
- Class
- Airline
- Departure time
- Ticket prices

Relevance:

- Flight duration: Impacts convenience and scheduling.
- Number of stops: Affects travel time and convenience.
- Class: Reflects pricing differentials and passenger preferences.
- Airline: Analyzes pricing strategies and customer satisfaction.
- Departure time: Influences pricing dynamics and demand variations.
- Ticket prices: Main dependent variable representing flight costs.

Key Insights and Trends:

Summary of Insights:

- Flight ticket prices exhibit variations based on factors such as flight duration, number of stops, class, airline, and departure time.
- Certain airlines or classes may have higher average ticket prices compared to others.
- Longer flight durations tend to correlate with higher ticket prices.
- Ticket prices can fluctuate based on the time of day or season.

Average of price by departure_time
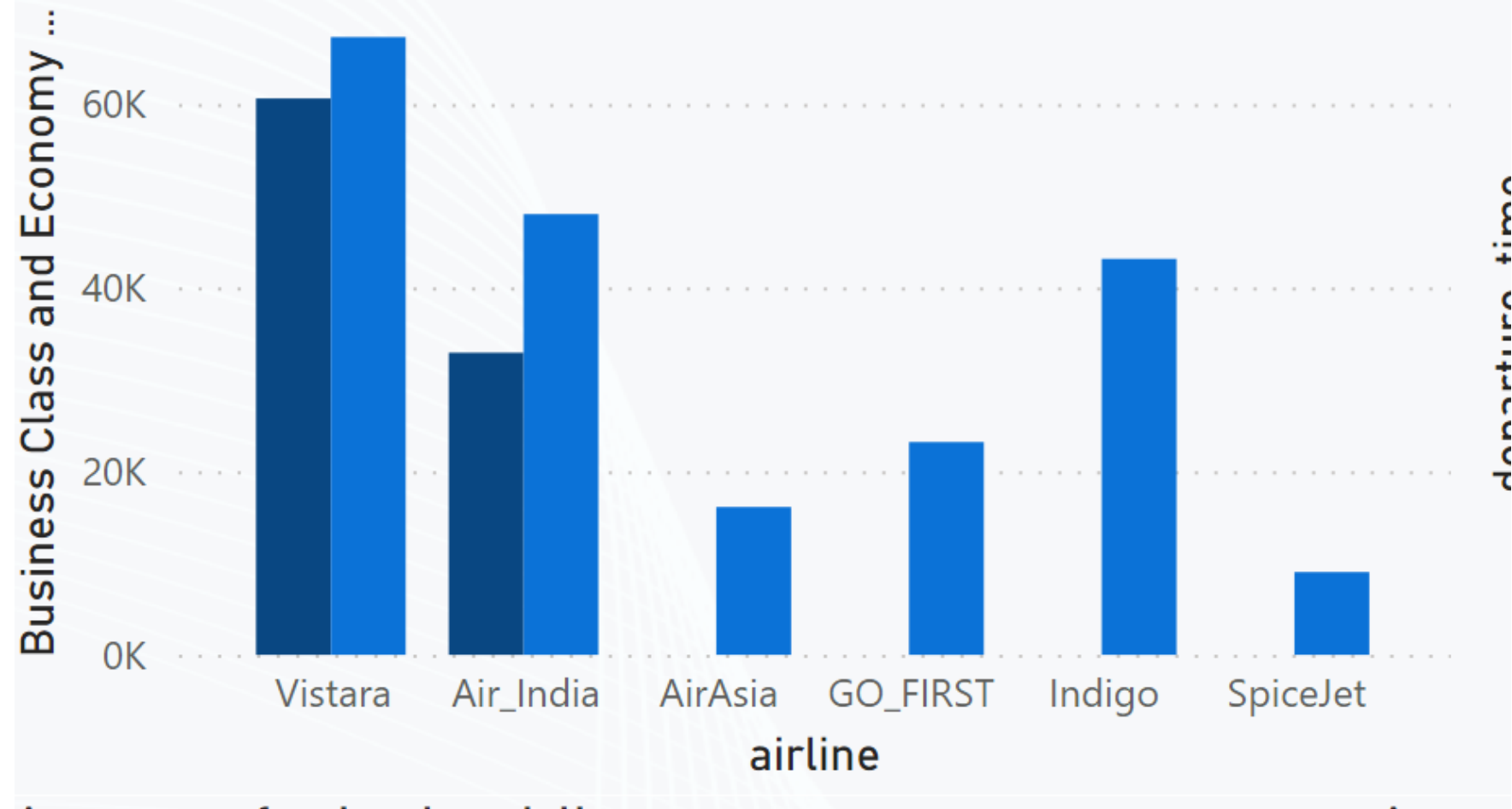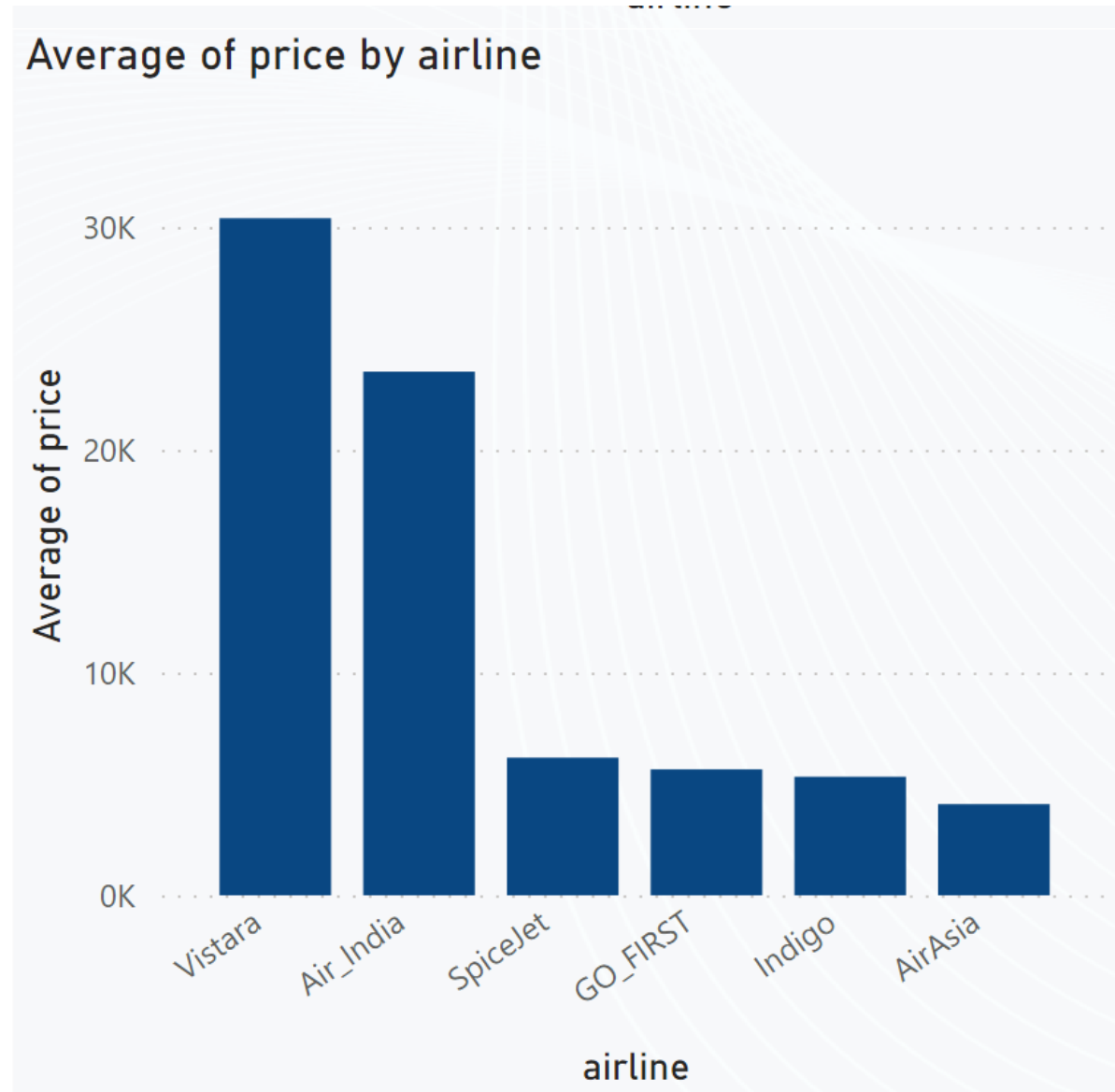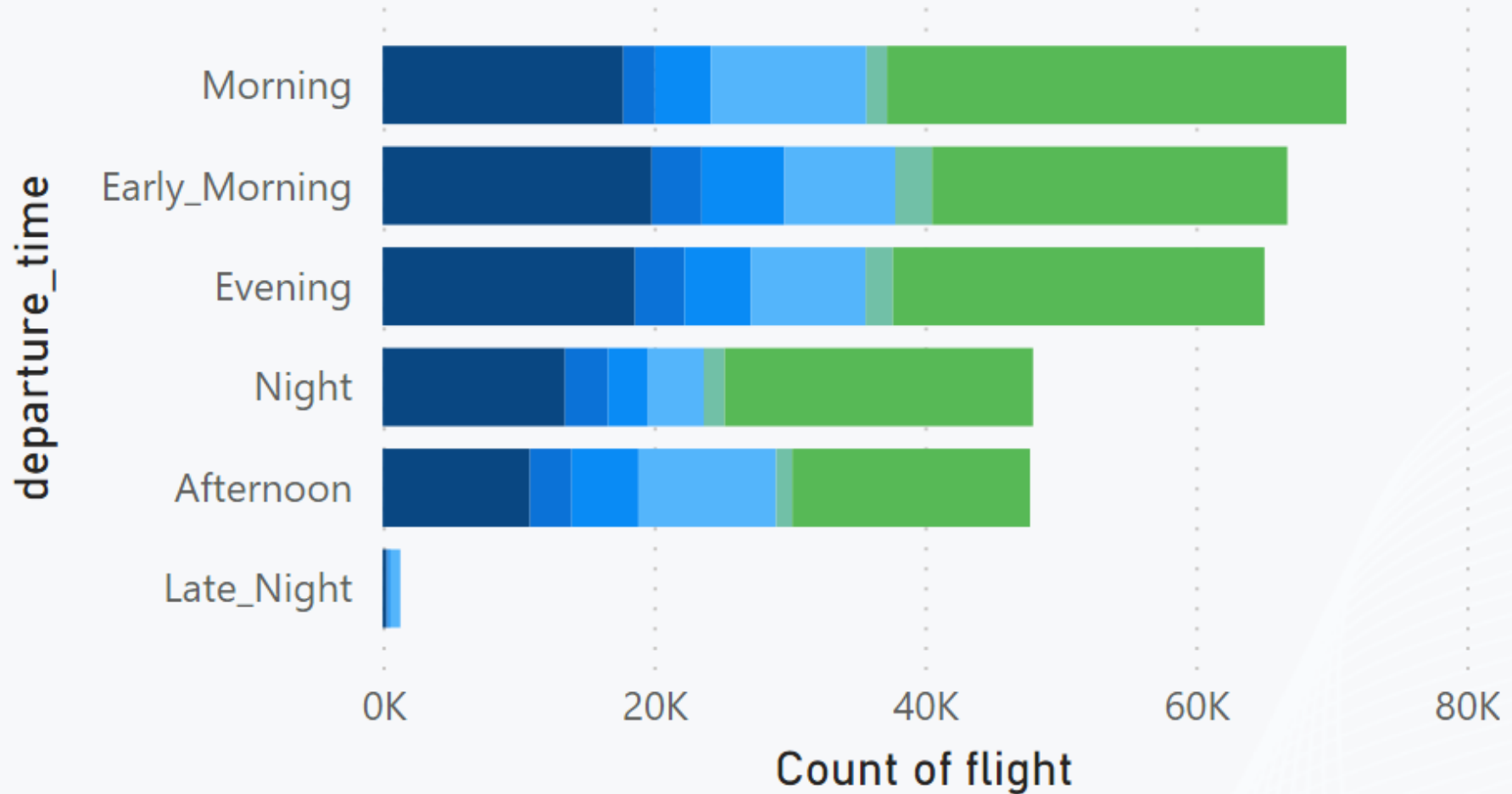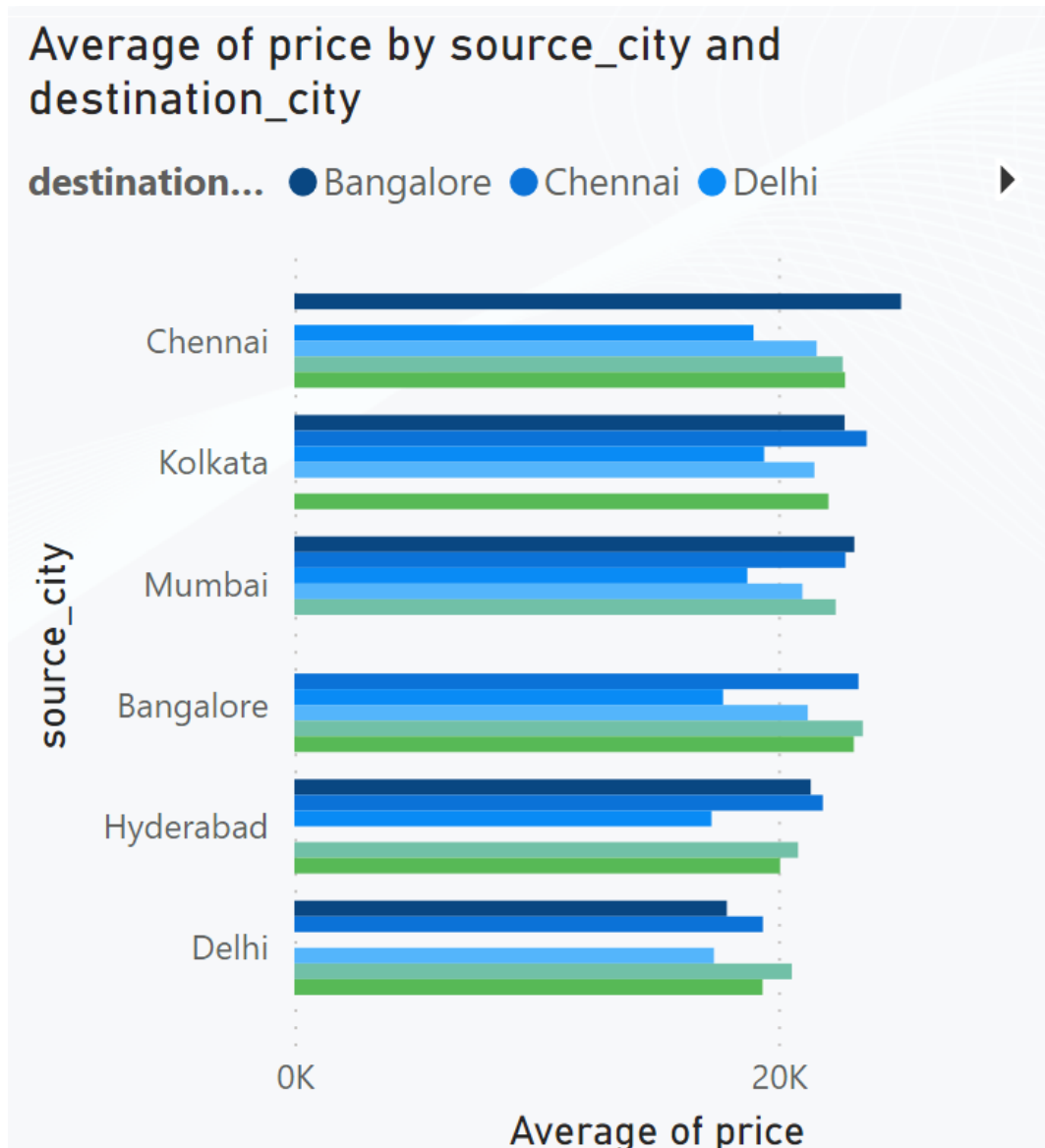
Recommendations

Improve Pricing Strategies:

- Implement dynamic pricing models to optimize ticket prices based on demand, seasonality, and market trends.
- Conduct regular market research and competitor analysis to stay informed about pricing practices in the industry.
- Utilize data-driven insights to identify pricing differentials and adjust prices accordingly.
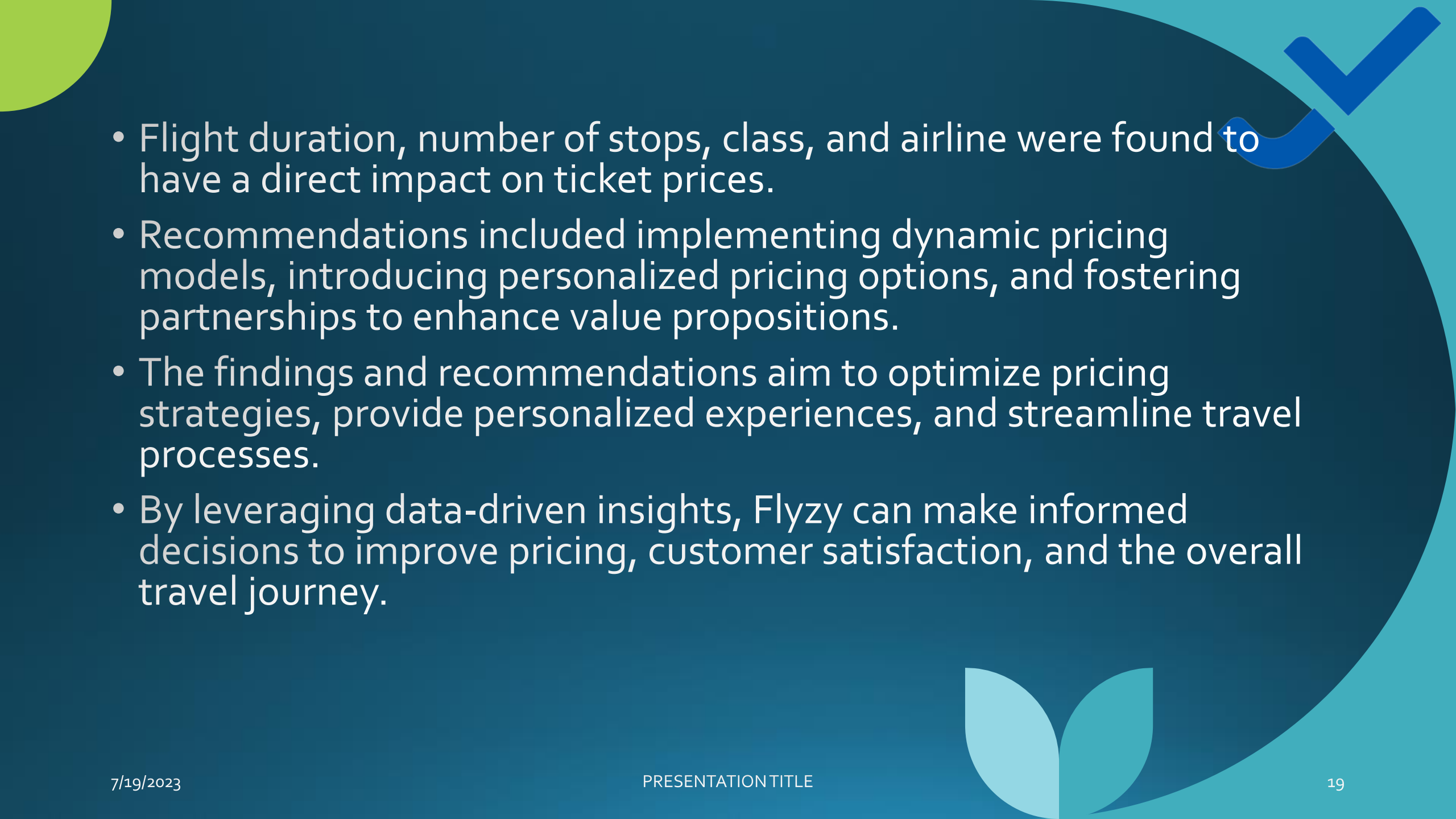
Dynamic and Personalized Pricing:

- Introduce personalized pricing options based on customer segmentation, loyalty programs, or specific travel preferences.

- Utilize customer data and preferences to offer tailored pricing packages, upgrades, or add-on services.

- Leverage advanced analytics to analyze customer behavior and predict willingness-to-pay for better pricing decisions.

Key Take Aways

- The project aimed to analyze flight ticket prices and improve the travel experience through data analysis and insights.

- Key factors influencing ticket prices were examined, including flight duration, number of stops, class, airline, and departure time.

- The dataset provided reliable and relevant information from various airlines, enabling a comprehensive analysis.

- Through the methodology of data preparation, exploratory analysis, and modeling, significant patterns, correlations, and insights were uncovered.

- Flight duration, number of stops, class, and airline were found to have a direct impact on ticket prices.

- Recommendations included implementing dynamic pricing models, introducing personalized pricing options, and fostering partnerships to enhance value propositions.

- The findings and recommendations aim to optimize pricing strategies, provide personalized experiences, and streamline travel processes.

- By leveraging data-driven insights, Flyzy can make informed decisions to improve pricing, customer satisfaction, and the overall travel journey.