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## Airline Customer Satisfaction Analysis

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## **1. Introduction**

This section provides an overview of the project, its objectives, and the importance of analyzing customer satisfaction in the airline industry. It sets the context for the analysis and outlines the structure of the report.

## **2. Data Collection and Methodology**

This section describes the data collection process, including the sources of data, the sample size, and the variables considered. It also explains the methodology used for data analysis, including any preprocessing steps, tools, and techniques employed.

## **3. Data Analysis**

### **Overview of Data**

A brief description of the dataset, including the number of records, key variables, and any notable characteristics.

### **Descriptive Statistics**

Summary statistics for key variables, such as mean, median, standard deviation, and distribution of satisfaction scores.

### **Data Visualization**

Visual representations of the data, including charts, graphs, and plots that highlight important trends and patterns.

## **4. Predictive Analysis**

### **Regression Analysis**

An explanation of the regression analysis performed, including the variables used, the model built, and the results obtained.

### **Predictive Models**

Details of the predictive models developed to forecast customer satisfaction, including the algorithms used and the performance metrics.

### **Model Evaluation**

An assessment of the predictive models, including accuracy, precision, recall, and any other relevant evaluation metrics.

## 5. Key Insights

### Overall Passenger Satisfaction

- Total Passengers: 129,880
- Satisfied Passengers: 56,428
- Satisfaction Rate: 43.4%

### Customer Retention

- Total Returning Passengers: Over 106,100
- Retention Rate: 82%

### Factors Contributing to Satisfaction

- In-Flight Services: High satisfaction in onboard service, in-flight entertainment, seat comfort, leg room service, and baggage handling.
- Areas for Improvement: In-flight WiFi service, online booking, and gate location.

### Class-wise passengers

- Business Class: 62,160 passengers
- Economy Class: 58,309 passengers
- Economy Plus Class: 9,411 passengers

### Customer Type and Travel Type Breakdown

- First-time Customers: 23,780 passengers
- Returning Customers: 106,100 passengers
- Business Travel: 89,583 passengers
- Personal Travel: 40,187 passengers

## 6. Recommendations

### Enhance In-Flight WiFi Service

- Upgrade the quality and reliability of in-flight WiFi. Consider offering more data packages or free data to meet passenger expectations.

### Optimize Online Booking Process

- Simplify and streamline the booking process. Make the website more user-friendly and improve the mobile app. Gather feedback from passengers to identify specific pain points and address them.

### **Improve Gate Location Experience**

- Ensure that gate locations are clearly marked and easily accessible. Provide better signage and assistance to help passengers find their gates quickly and efficiently. Consider implementing digital wayfinding solutions to enhance the passenger experience.

### **Focus on Services Rated Below 3 Stars**

- Identify specific areas in services rated below 3 stars and implement targeted improvements to enhance passenger experience.

## **7. Conclusion**

A summary of the key findings and recommendations, emphasizing the importance of addressing the identified issues to improve customer satisfaction and retention. This section also highlights the potential impact of the proposed solutions on the airline's overall performance.

## **8. Appendices**

### **Data Dictionary**

A detailed description of the variables used in the analysis, including their definitions and data types.

### **Additional Charts and Graphs**

Supplementary visualizations that provide further insights into the data.

### **References**

A list of sources and references used in the report.

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