

# Aviation Passenger Satisfaction Analysis (Excel)

## Project Overview

This project analyzes airline passenger satisfaction using Microsoft Excel. The goal was to identify key factors influencing customer satisfaction, evaluate the impact of flight delays, and build an interactive dashboard for business decision-making. The analysis was performed on a dataset containing over 100,000 passenger records, covering demographics, travel type, service ratings, and delay information.

## Project Objectives

- 1 Analyze customer satisfaction across travel classes and passenger segments.
- 2 Evaluate the impact of operational delays on satisfaction.
- 3 Identify key service factors influencing passenger experience.
- 4 Build an interactive Excel dashboard with KPIs and filters.

## Tools and Techniques Used

- 1 Microsoft Excel
- 2 Data cleaning and preprocessing
- 3 Pivot tables and pivot charts
- 4 Slicers for interactive filtering
- 5 Conditional formatting for delay analysis
- 6 KPI metrics and dashboard design

## Key Performance Indicators (KPIs)

- 1 Overall satisfaction rate
- 2 Average departure delay
- 3 On-time flight percentage

## Core Analyses Performed

- 1 Satisfaction by travel class
- 2 Satisfaction by type of travel
- 3 Satisfaction by age group
- 4 Delay impact on satisfaction
- 5 Average delay by travel class
- 6 Seat comfort vs satisfaction
- 7 Inflight entertainment vs satisfaction
- 8 Cleanliness vs satisfaction

## **Key Insights**

- 1 Business class passengers demonstrate the highest satisfaction levels.
- 2 Business travel customers report higher satisfaction than personal travelers.
- 3 Major delays significantly reduce customer satisfaction.
- 4 On-time performance is strongly linked to higher satisfaction.
- 5 Seat comfort has a strong positive impact on satisfaction.
- 6 Inflight entertainment is a major driver of customer experience.
- 7 Cleanliness consistently correlates with satisfaction across segments.
- 8 Economy class shows lower satisfaction, indicating improvement opportunities.
- 9 Middle-aged passengers form the largest customer segment.
- 10 Enhancing seating, entertainment, and cleanliness can significantly improve satisfaction.

## **Project Outcome**

The project resulted in a fully interactive Excel dashboard that enables dynamic filtering and visual analysis of passenger satisfaction metrics. The dashboard provides clear, actionable insights into service quality, operational performance, and customer segments.