AIRLINE PASSENGER SATISFACTION

**Team Tactical**

Tabitha Kariuki - TL

Christopher Kimani

Sharon Olago

# Introduction

A major key to the success of any business is the satisfaction of its customers. For an airline, having passengers unsatisfied with its services means decreased revenue, as the passengers are unlikely to return to the airline. Additionally, having bad reviews hurts the reputation of an airline, deterring new customers from employing its services. Customer satisfaction is therefore essential in the airline industry. It is affected by how the airline’s overall services are, right from booking a ticket with them to the various conditions during the flight, factors also highlighted in [this article](https://blogs.perficient.com/2018/05/14/customer-satisfaction-in-the-airline-industry/) by Perficient. Being able to determine passenger satisfaction levels, as well as the top factors that influence this, will aid airlines in improving their services.

# Problem Statement

Passengers who are dissatisfied with a particular airline have a higher likelihood of not using that airline’s services again. Bad reviews also deter new customers. This leads to decreased profit. Our main aim is to explore the factors influencing satisfaction and build a model that can predict whether a passenger is generally satisfied or dissatisfied with an airline.

# General Objective

Build a model that can predict a passenger’s satisfaction with an airline.

# Specific Objectives

- Determine the relationships between overall level of satisfaction and various predictor variables (such as gender, travel class, inflight wifi service, etc).

- Determine the correlation between overall level of satisfaction and the predictor variables.

- Determine the top factors affecting satisfaction with an airline.

- Build a model that can predict a passenger’s overall satisfaction with an airline.

# Data Source

The dataset is from kaggle and can be accessed [here](https://www.kaggle.com/datasets/teejmahal20/airline-passenger-satisfaction?select=test.csv). The dataset’s observations are from the USA.

## About the Dataset

It consists of 25976 rows and 25 columns.

Columns:

1. **Index** column
2. **Id**
3. **Gender**: Gender of the passengers (Female, Male)
4. **Customer Type**: The customer type (Loyal customer, disloyal customer)
5. **Age**: The actual age of the passengers
6. **Type of Trave**l: Purpose of the flight of the passengers (Personal Travel, Business Travel)
7. **Class**: Travel class in the plane of the passengers (Business, Eco, Eco Plus)
8. **Flight distance**: The flight distance of this journey
9. **Inflight wifi service**: Satisfaction level of the inflight wifi service (0:Not Applicable;1-5)
10. **Departure/Arrival time convenient**: Satisfaction level of Departure/Arrival time convenient
11. **Ease of Online booking**: Satisfaction level of online booking
12. **Gate location**: Satisfaction level of Gate location
13. **Food and drink**: Satisfaction level of Food and drink
14. **Online boarding**: Satisfaction level of online boarding
15. **Seat comfort**: Satisfaction level of Seat comfort
16. **Inflight entertainment**: Satisfaction level of inflight entertainment
17. **On-board service**: Satisfaction level of On-board service
18. **Leg room service**: Satisfaction level of Leg room service
19. **Baggage handling**: Satisfaction level of baggage handling
20. **Check-in service**: Satisfaction level of Check-in service
21. **Inflight service**: Satisfaction level of inflight service
22. **Cleanliness**: Satisfaction level of Cleanliness
23. **Departure Delay in Minutes**: Minutes delayed when departure
24. **Arrival Delay in Minutes**: Minutes delayed when Arrival
25. **Satisfaction**: Airline satisfaction level(Satisfaction, neutral or dissatisfaction)