AIRLINE DATA ANALYTICS FOR AVAITION INDUSTRY

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AGENDA

- IDEATION
- DESIGN PHASE 1
- DESIGN PHASE 2
- DEVELOPMENT PHASE
- WORKING WITH DATASET
- DATA VISUALIZATION
- CONCLUSION

OBJECTIVES

- In this project, we analysed the dataset, visualize the data, define terms, and give further examples for the aviation industry to analysed data from every channel, such as to develop a distinctive customer profile based on a wide variety of demographic information, habits, and preferences

- The platform offers decision-support tools for civil aviation, such as maintenance plans, real-time alerts, health monitoring fuel-saving strategies, and flight schedules.

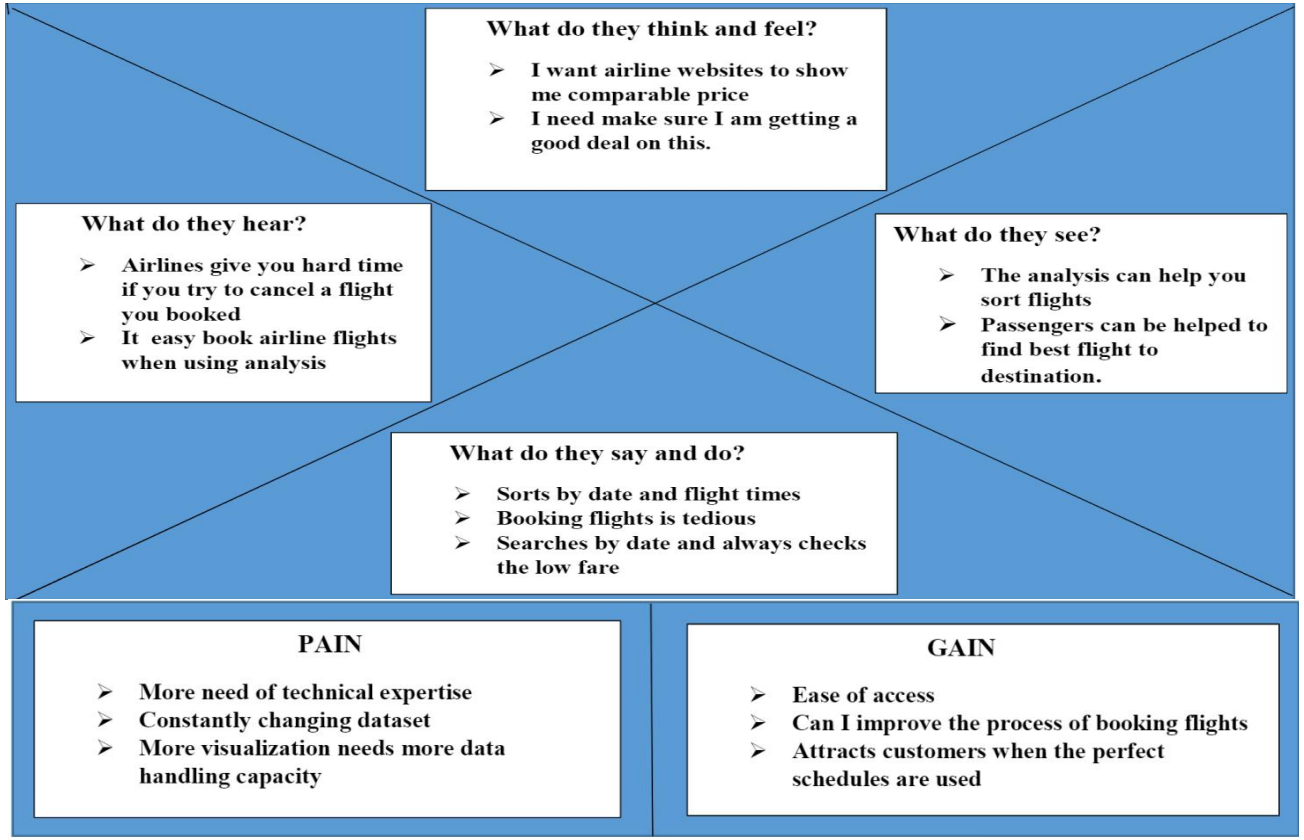
ABSTRACT

- The goal is to provide airports, airlines, and the general public to view the delay of flights to the destination which may occur due to climatic conditions to make the passengers aware of the arrival of flights.
- Airport codes can refer to either the IATA airport code, a three-letter code used in passenger reservation, ticketing, and baggage-handling systems, or the ICAO airport code, a four-letter code used by ATC systems and for airports without an IATA airport code.
- At the municipal level, to provide better airline and airport services and to avoid delays in air travel across different location

IDEATION PHASE

- Literature survey : The paper introduces the architecture of the platform and present application to show how the platform facilitates civil aviation
- **Reference 1 :** Mohamed et al. have studied the pattern of arrival delay for non-stop domestic flights at the Orlando International Airport. They focused primarilyonthecyclic variations that happen in the air travel demand and the weather at that particular airport
- **Reference 2 :** In Shervin et al.’s work , their motive of research is to propose an approach that improves the operational performance without hampering or effecting the planned cost

EMPATHY MAP


What do they think and feel?
I want airline websites to show me comparable price
I need make sure I am getting a good deal on this.
What do they hear?
Airlines give you hard time if you try to cancel a flight you booked
It easy book airline flights when using analysis
What do they see?
The analysis can help you sort flights
Passengers can be helped to find best flight to destination.
What do they say and do?
Sorts by date and flight times
Booking flights is tedious
Searches by date and always checks the low fare
PAIN
More need of technical expertise
Constantly changing dataset
More visualization needs more data handling capacity
GAIN
Ease of access
Can I improve the process of booking flights
Attracts customers when the perfect schedules are used

DESIGN PHASE-I

- **Proposed Solution** :Due to the use of the smart data analytics passengers will avoid many issues with baggage tracking.

- **Problem Solution Fit** : The motive is to propose an approach that improve the operational performance

- **Solution Architecture** : It process big data processing and aviation big data repository using Cognos Analytic

DESIGN PHASE II

- **Functional requirement** : Using IBM Cognos analytics user can visualize if any delay of flights Registration can done through Gmail and User can view the delay of flights report

- **Non Functional requirement** : user can easily understand and use the features in an effective manner ,wide range of user can make access of the website and user can access at anytime .The system shall be available 24 hours a day 7 days a week

PROJECT DEVELOPMENT PHASE

- Sprint-1 : Collection of data set and choose the area of interest to be tracked analysed as user
- sprint-2 : Using Cognos as a developer to visualize the provided dataset into the dashboard
- sprint-3 : Simply access and use the dashboard as a user

  Dashboard link:

  1) https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FIBM%2BDashboard%2BAirport&action=view&mode=dashboard&subView=model0000018488d3d97b_00000001

  2) **https://us1.ca.analytics.ibm.com/bi/?perspective=dashboard&pathRef=.my_folders%2FIBM%2BDashboard%2BAirport&action=view&mode=dashboard&subView=model00000184890594b3_00000 000**

- sprint-4 : Detailed report of my visualization and Established the dashboard into a website and submit the website

WORKING WITH THE DATASET

- Understanding the Dataset
- Loading of Dataset
- Data Presentation
- Joining of Tables
- Exploration of Data

DATA VISUALIZATION

- Representation of Flight Count By categories
- No of Flight Countries Region and Airports
- Continent Wise Airports With Types
- Country Wise Airports Types
- Dashboard Showing Count Of Flights By Types,Countries and Continent

CONCLUSION

- Understanding traveler demand for specific cities and pricing flights can be done using data analytic.
- It can be used to predict future glitches prevent them from happening and make the maintenance procedure more accurate, after analyzing the data, a lot of insights have been generated.
- Most of the delays and cancellations are due to three main reasons which are stated as weather, Airlines carrier issues and the nation air system.

GITHUB : https://github.com/IBM-EPBL/IBM-Project-50375-1660905515

THANK YOU