

DAB 303 – Marketing Analytics: Project Proposal

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Project Topic:

Airline Loyalty Program

Introduction:

The airline industry continually seeks innovative strategies to enhance customer loyalty and optimize marketing efforts. In this project, I will delve into a dataset associated with a Canadian airline's Customer Loyalty Program. The dataset consists of data collected during a promotional campaign conducted between February and April 2018.

In the context of Marketing Analytics course, this project aligns perfectly with the course objectives. It allows to apply the concepts and methodologies learned in the course to a real-world scenario. It demonstrates the practical application of analytics techniques to assess campaign impact, customer segmentation, demographic targeting, and the correlation between marketing efforts and subsequent business outcomes like flight bookings. This practical application of marketing analytics principles not only enhances our understanding of the subject but also equips us with valuable skills for future endeavors in the field of data-driven marketing.

Objective:

The primary objectives of this project are:

- Analyzing the impact of the promotional campaign on the enrollment and engagement levels within the loyalty program.
- Analyzing whether certain demographic segments of loyalty members exhibited more interest and engagement with the campaign.
- Assessing the campaign's influence on flight bookings for summer 2018.

This project will leverage Exploratory Data Analysis (EDA) techniques to gain meaningful insights from the dataset. Utilizing visualization tools to unravel patterns, trends, and correlations within the loyalty program data. Furthermore, develop predictive model that can assist airline in proactively retaining customers and optimizing their marketing strategies.

Motivation:

This project is captivating due to several reasons. From a business standpoint, it offers a pathway to uncover invaluable insights that could reshape how airlines engage with their customers. Understanding the campaign's impact on loyalty memberships and subsequent flight bookings could redefine marketing strategies, potentially enhancing customer retention and overall profitability for airlines. On a personal level, this project is an enriching learning opportunity, allowing me to delve into complex datasets, apply analytical techniques, and derive actionable conclusions that could influence real-world business strategies.

Evaluation:

- Exploratory Data Analysis revealing valuable patterns and trends in the dataset.
- Accurate predictive models effectively identifying potential customer churn.
- comprehensive insights into the campaign's impact on loyalty memberships, demographic adoption patterns, and its influence on summer flight bookings.
- Providing optimized marketing strategies.

Resources:

Dataset Description

Dataset is sourced from Maven Analytics which is an educational platform for data enthusiasts.

Dataset Link: <https://www.mavenanalytics.io/data-playground?page=1&pageSize=5>

Dataset includes range of variables like loyalty program signups, enrollment and cancellation details, and additional customer information.

Table	Field	Description
Customer Flight Activity	Loyalty Number	Customer's unique loyalty number
	Year	Year of the period
	Month	Month of the period
	Flights Booked	Number of flights booked for member only in the period
	Flights with Companions	Number of flights booked with additional passengers in the period
	Total Flights	Sum of Flights Booked and Flights with Companions

	Distance	Flight distance traveled in the period (km)
	Points Accumulated	Loyalty points accumulated in the period
	Points Redeemed	Loyalty points redeemed in the period
	Dollar Cost Points Redeemed	Dollar equivalent for points redeemed in the period in CDN
Customer Loyalty History	Loyalty Number	Customer's unique loyalty number
	Country	Country of residence
	Province	Province of residence
	City	City of residence
	Postal Code	Postal code of residence
	Gender	Gender
	Education	Highest education level (High school or lower > College > Bachelor > Master > Doctor)
	Salary	Annual income
	Marital Status	Marital status (Single, Married, Divorced)
	Loyalty Card	Loyalty card status (Star > Nova > Aurora)
	CLV	Customer lifetime value - total invoice value for all flights ever booked by member
	Enrollment Type	Enrollment type (Standard / 2018 Promotion)
	Enrollment Year	Year Member enrolled in membership program
	Enrollment Month	Month Member enrolled in membership program
	Cancellation Year	Year Member cancelled their membership
	Cancellation Month	Month Member cancelled their membership

Methods and Tools:

- Exploratory Data Analysis (Python)
- Data Preprocessing (Python)
- Data Visualization (Python/Tableau)
- Predictive model (Python)

References:

- *Free Data Sets & dataset samples: Maven Analytics*. Free Data Sets & Dataset Samples | Maven Analytics. (n.d.). <https://www.mavenanalytics.io/data-playground?page=1&pageSize=5>

- Placek, M. (n.d.). *Topic: Coronavirus: Impact on the Aviation Industry Worldwide*. Statista.
<https://www.statista.com/topics/6178/coronavirus-impact-on-the-aviation-industry-worldwide/#dossierSummary>
- [Hear Your Customers: An Airline Case Study Analysis | Integrate.io](#)