

Holiday Package Purchase Prediction



Olivia Lipari, Atharva Rotkar, Rishabh Sharma, Rachit Pandya,
Arivunidhi Arivan

Problem Statement

Investigate and develop a predictive model to determine the likelihood of customer purchase for the newly introduced travel package. Identify the most significant variables influencing purchase behavior and recommend targeted strategies to effectively reach and engage with the most responsive customer segments

Problem Statement

- Objectives:
 - Optimize marketing efforts
 - Reduce expenditure
 - Target potential customers effectively
- Importance of findings:
 - Guide marketing team decisions
 - Tailor strategies to specific customer segments
 - Increase efficiency and effectiveness of marketing expenditure
- Potential impact:
 - Cost efficiency
 - Targeted marketing
 - Competitive advantage
 - Business growth

Data

Source: Internal customer database of the company

Format: CSV (Comma-Separated Values)

Rows: To be determined after analyzing the dataset

Columns: Includes Designation, Passport, Tier City, Marital Status, Occupation, Monthly Income, Age, and Preferences for 5-star properties

Link:

<https://www.kaggle.com/datasets/susant4learning/holiday-package-purchase-prediction/data>

Hypothesis

Based on preliminary analysis, we hypothesize that customers with specific characteristics (e.g., Executives, single/unmarried, from tier 3 cities, with passports, and interests in 5-star properties) are more likely to purchase the new Wellness Tourism Package.

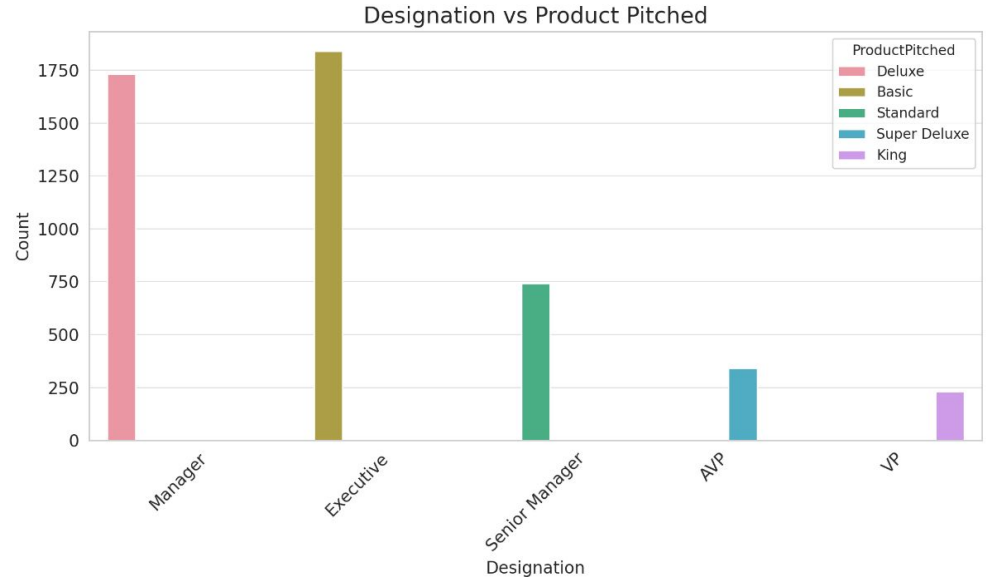
Project Plan

Analysis Methodology: The team will conduct a comprehensive data analysis using Python for data cleaning, transformation, and modeling. We aim to identify key customer segments and predict potential buyers of the new package.

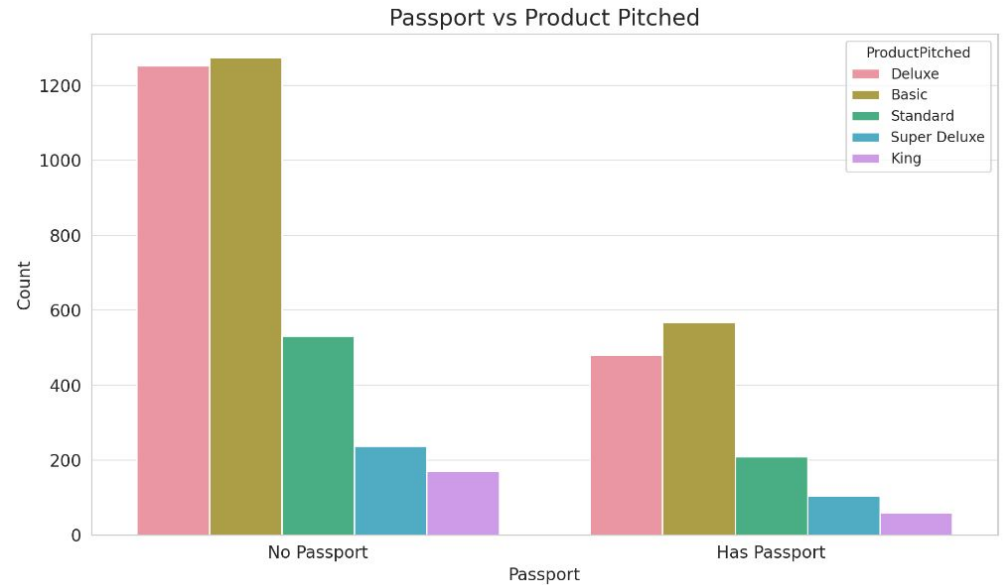
Data Visualization: Using Tableau, we will create visualizations to depict customer segments, purchase patterns, and other relevant insights to assist in decision-making.

Exploratory Work

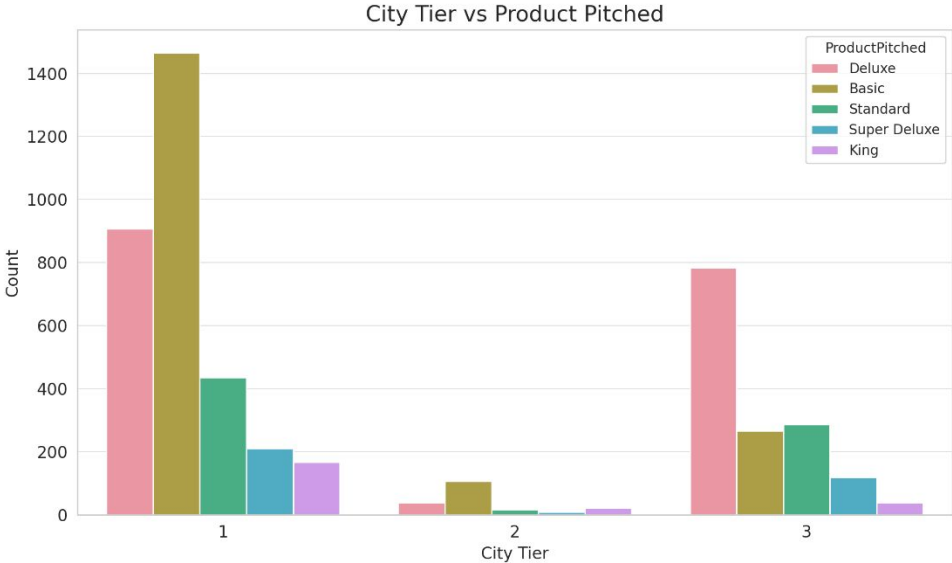
Different designations show varying levels of product purchase. This suggests that certain professional levels may be more inclined to purchase travel packages, with specific designations potentially being key targets for the new Wellness Tourism Package.



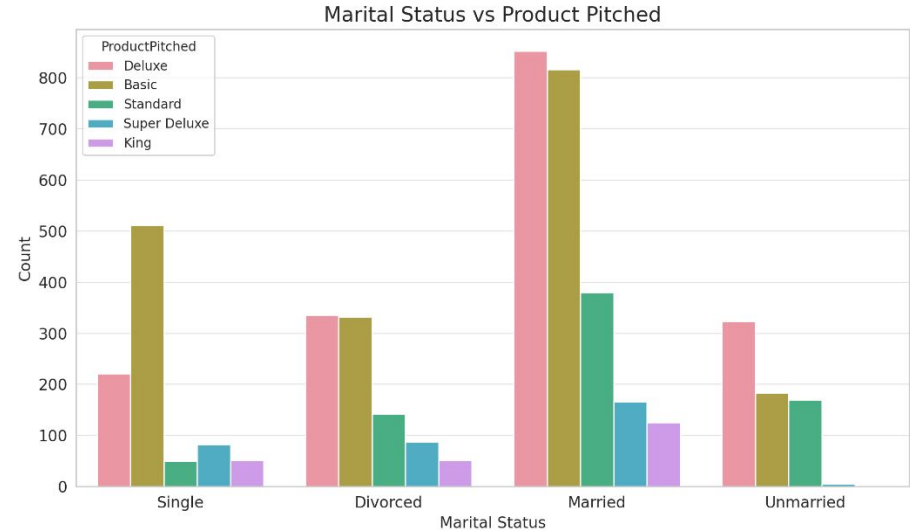
Customers with passports are more likely to have purchased a package compared to those without, indicating that having a passport might be a strong predictor of interest in travel packages.



There is a variation in product purchase across city tiers, suggesting that the city's tier could influence travel package purchases.



Marital status appears to influence the likelihood of purchasing a travel package, with differences observed between single, married, and other statuses.



The distribution of monthly income among customers who have purchased a package shows that certain income ranges might be more predisposed to purchasing travel packages.

