**Project Title**

*A project report submitted to ICT Academy of Kerala*

*in partial fulfillment of the requirements*

*for the certification of*

**CERTIFIED SPECIALIST**

**IN**

**DATA SCIENCE & ANALYTICS**

submitted by

**Team**

**Members**

**Name**



**ICT ACADEMY OF KERALA**

**THIRUVANANTHAPURAM, KERALA, INDIA**

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**List of Abbreviations**

CustomerID: Unique customer ID

ProdTaken: Whether the customer has purchased a package or not (0: No, 1: Yes)

Age: Age of customer

TypeofContact: How the customer was contacted (Company Invited or Self Inquiry)

CityTier: City tier depends on the development of a city, population, facilities, and living standards. The categories are ordered i.e. Tier 1 > Tier 2 > Tier 3

Occupation: Occupation of customer

Gender: Gender of customer

NumberOfPersonVisiting: Total number of persons planning to take the trip with the customer

PreferredPropertyStar: Preferred hotel property rating by customer

MaritalStatus: Marital status of customer

NumberOfTrips: Average number of trips in a year by customer

Passport: The customer has a passport or not (0: No, 1: Yes)

OwnCar: Whether the customers own a car or not (0: No, 1: Yes)

NumberOfChildrenVisiting: Total number of children with age less than 5 planning to take the trip with the customer

Designation: Designation of the customer in the current organization

MonthlyIncome: Gross monthly income of the customer

PitchSatisfactionScore: Sales pitch satisfaction score

ProductPitched: Product pitched by the salesperson

NumberOfFollowups: Total number of follow-ups has been done by the salesperson after the sales pitch

DurationOfPitch: Duration of the pitch by a salesperson to the customer

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**Abstract**

In this project, data from a company named “Trips & Travel.Com” is used with the goal to make marketing expenditure more efficient. The company wants to enable and establish a viable business model to expand the customer base. One of the ways to expand the customer base is to introduce a new offering of packages. Currently, there are 5 types of packages the company is offering - Basic, Standard, Deluxe, Super Deluxe, King. Looking at the data of the last year, we observed that 18% of the customers purchased the packages. However, the marketing cost was quite high because customers were contacted at random without looking at the available information. The company is now planning to launch a new product i.e., Wellness Tourism Package. Wellness Tourism is defined as Travel that allows the traveller to maintain, enhance or kick-start a healthy lifestyle, and support or increase one's sense of well-being. However, this time the company wants to harness the available data of existing and potential customers to make the marketing expenditure more efficient. For this purpose, available data shall be used to predict the potential customer who is going to purchase the newly introduced travel package. We need to analyse the customers' data and information to provide recommendations to the Policy Maker and Marketing Team and also build a model to predict the potential customer who is going to purchase the newly introduced travel package.

**1. Problem Definition**

**1.1 Overview**

**1.2 Problem Statement**

Through this project we are trying to implement supervised learning algorithms to predict which customer is more likely to purchase the newly introduced travel package. We are also trying to predict which variables are most significant and which segment of customers should be targeted more.

**2. Introduction**

The tourism industry boosts the economy of any country. Tourism is one of the largest sectors that generate employment, infrastructure, earns foreign exchange and contributes to national economy. Tourism industry deals with travel booking and services, transportation services, hotel accommodation, dining, tour packages, facilitation of travel documentation tour escorts and other travel allied services.

Trips and Travels is a tourist company that offer attractive tourist packages world wide. Trips & Travels remained at the forefront by adopting innovative marketing strategies in its marketing mix to break the chaos of other tourist companies that offer similar services. This project aims to analyze the marketing strategies adopted by " Trips & Travel.com" to make marketing expenditure more efficient. The key to all tourism marketing strategies is a multifaceted approach in designing packages that enable them to expand their customer base.

Currently, they have introduced 5 types of packages called Basic, Standard, Deluxe, Super Deluxe, King. However on analyzing the data last year it was found that although 18% of the customers purchased the packages the marketing cost was quite high because customers were contacted at random without looking at the available information. The company with an aim to expand its customer base is now planning to launch a new product i.e. Wellness Tourism Package. Wellness Tourism is defined as Travel that allows the traveller to maintain, enhance or kick-start a healthy lifestyle, and support or increase one's sense of well-being. However before launching the new product it is necessary to explore the available data of existing and potential customers to make the marketing expenditure of this newly introduced package more efficient.

Machine learning is leading to technological innovation in all fields with a great impact on tourism sector. Various explanatory variables in the dataset can be used for predicting the various factors that affect the tourist industry. Hence in this project various supervised learning algorithms are used to predict the potential customers who are going to purchase this newly introduced package of Trips and Travels.com. This project will also enable us to understand the various factors that affect the marketing expenditure of the new package introduced by the company. Through the prediction model we would be able to identify significant factors affecting marketing expenditure of newly introduced package. Findings from this study can be also be used as a guide to tourism companies for a range of planning tasks.

**3. Literature Survey**

**7. Result**

**8. Conclusion**

**References**