***Data Science and Machine Learning***

This organization is a well-established company operating in the **hospitality sector**. BookMe provides accommodation to tourists and travellers, delivering necessary lodging services to those who travel the world, whether for leisure or business. It provides an international website where citizens can book their accommodation. Presently they have around 30,000 registered customers and serve more than 100,000 consumers a year. The website offers a variety of services, but they are focused in providing rooms with the best conditions possible. In order to control the quality of the services, every time a client makes a reservation, at the end of the stay, a survey is sent to complete on how the guest perceived the provided services. A scale of 0 to 5 is used to rate multiple aspects of the services, in this way, customers can reveal how satisfied they are regarding location, price, amenities provided, and others.

**Try to cluster the different types of customers that the company must create more efficient campaigns.**

**Current situation regarding clients and rooms (excluding quality of service).**

**No Churn Scenario (people who are staying): Related to single rooms (0.3)**

**Churn Scenario (people who are leaving): Related to double rooms (0.3)**

**Business (people traveling for business): Related to single rooms (0.6)**

**Leisure (people traveling for business): Related to double rooms (0.5)**

**Suites – no variation with room (inverse relationship with Rooms (single + double). We can think about potentially excluding this from the evaluation.**

**Longevity vs Churn – Related with no Churn (people who signed over a year ago are less likely to churn). Also, they are more likely to travel for business as opposed to leisure.**

**We can’t infer about Churn and Type of Business as there’s no relationship there. However, we can assess churn and room type and room type and business**

**There’s a Churn relationship between Amenities, Staff and Online Booking, regardless of room type.**

**For singles, there’s churn related to Price Quality, Room Space, Check Out, Check In, Cleanliness and Bar Service.**

**For doubles, there’s churn related to Comfort. Average comfort factor is 2.89. On average, we’re getting a low value for comfort, which is hindering the type of doubles (2.84 for singles,**

**To tackle No Churn clients in doubles, we should focus on improving the comfort factor. Therefore, the marketing team should address this issue by promoting more hotels with higher comfort factor.**

**Demographics:**

**Currently, 163 people from the db are booking single rooms and are under 18y.o.**

**Staff might not be kid friendly. Av. Staff classification is 3.5 vs av. Staff classification of 3.2 for kids. For Churned clients, it becomes 2.84**

**407 people under 15 years old are Churn, 284 people under 15 years old are under no Churn.**

**794 people 65 years or older. (5.09%) – 464 are churn, 330 are no churn**

**1051 people under 18. (6.74%) – 624 are churn, 427 are no churn**

**Total DB 15586**