

## Week3 Assessment: Predictive Modeling (Regression-Classification-Segmentation-Forecasting)



Website: [www.analytixlabs.co.in](http://www.analytixlabs.co.in)

Email: [info@analytixlabs.co.in](mailto:info@analytixlabs.co.in)

**Disclaimer:** This material is protected under copyright act AnalytixLabs©, 2011-2018. Unauthorized use and/ or duplication of this material or any part of this material including data, in any form without explicit and written permission from AnalytixLabs is strictly prohibited. Any violation of this copyright will attract legal actions.

## **Part-1:**

### **Business Problem:**

One of the leading Retail companies in India would like to analyse their transaction data and understand the drivers for churners and high spenders. Along with that, the company want to understand overall customer behaviour so that they can define the strategy to improve the revenues/margins.

**Data Availability:** Company provided customer 360 view to understand the customer behaviour. Detailed data dictionary attached with this.

### **What do you require to work?**

In order to achieve the solution,

1. Require to perform segmentation to understand who are their customers and understand the key characteristics of customer.
2. Require to perform analysis to address the problems like understanding the drivers for churners, high spenders and customer behavior using **Customer360 degree data set.**

### **OUTPUTS:**

1. You should use python to solve the problem.
2. The final outputs including detailed python-code with proper comments and detailed analysis files (excel, ppt) should be shared
3. If you are using any statistical analysis, modeling techniques to solve the problem, you require justify the rationality behind it.

## Part-2: Forecasting

### **Business Problem:**

One of the leading shampoo manufacturing company would like to forecast the demand for shampoo in next 6 months.

**Data Availability:** Data of shampoo sales has been provided for last 36 Months.

### **Expectations from the Trainees:**

1. Understand the data & perform the data exploration.
2. Data preparation before the forecast model building
3. Perform multiple forecasting techniques and choose best technique to forecast the demand of shampoo
4. Validate the model and present the results in Excel or PPT (Leverage output template).