

# **INFO 7374: ST Digital Marketing Analytics**

## **Assignment 2 - Team 5**

### **Claa Link:**

<https://tinyurl.com/info7374-team5-asgn2-clat>

### **W5H**

#### **1. What is it?**

This case study focuses on utilizing the current transaction and promotions data to understand the customer base and how customers are segmented on the basis of their lifetime value. In addition to the Customer Lifetime Value, this study focuses on the comparison and testing of two different versions of the same product. The case study is implemented in Python and data is viewed in Tableau for analysis.

#### **2. Who will use it?**

The marketing and product management teams can use this tool to understand their customer base and their segmentation across various buckets. Also, understand how various marketing initiatives are making an impact on the overall revenue.

#### **3. Why will they use it?**

The tool will help the marketing and product management teams to evaluate the ongoing sales and marketing efforts on a real time basis.

- a. **Customer Segmentation:** To efficiently allocate their marketing budgets
- b. **Customer Lifetime Value:** To understand the lifetime value of existing customers across segments
- c. **AB Testing:** To compare two versions of a product and determine which one performs well

#### **4. When will they use it?**

This tool can be used in the following scenarios/use cases:

- to evaluate sales and revenue across customers on a monthly basis
- to evaluate comparison across two different versions of a product

#### **5. Where will they use it?**

They will use it in the Marketing Analytics and Strategic development department.

#### **6. How are they going to use it?**

**AB Testing:**

1. Pick a product (variable)
2. Identify or benchmark a goal
3. Create a control and a challenger

4. Split sample groups equally and randomly
5. Determine sample size
6. Determine test significance
7. Run one test at a time

### **Customer Segmentation**

The RFM values will be calculated based on the data inputs and segment the customers into high, mid and low value customers, so that the High Value customers can have a better tailored experience and they can deep dive into the problem areas with respect to the low value customers, and measure the impact of contributing attributes(region, promotions, product)

### **Customer Lifetime Value**

CLTV is to be used as a tool and not a strategy by identifying the segment of customer CLTVs based on their spending and target those customers with more products to generate revenue, should identify the top 10 customers by their CLTV and try to sell the products used by them to another segments

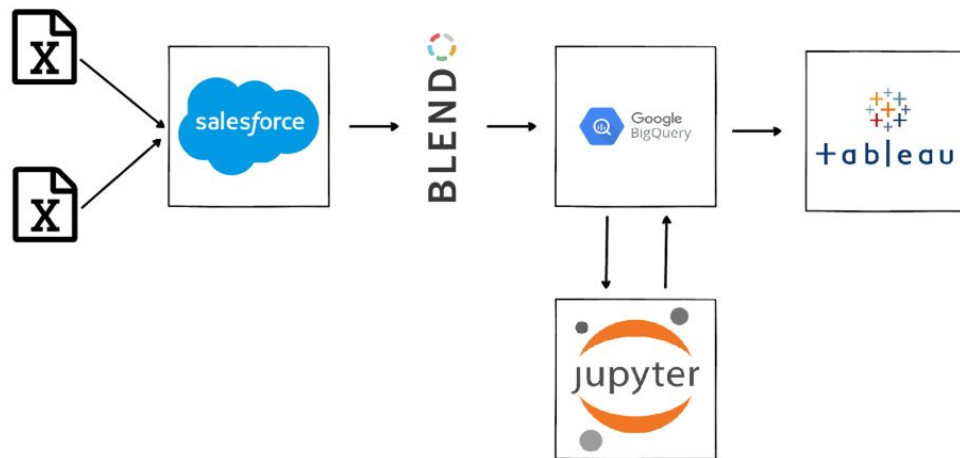
### **Tableau Public Dashboard Link:**

<https://tinyurl.com/info7374-team5-asgn2-tabpub>

### **Jupyter Notebook Links from Colab:**

1. Predicting next purchase date:  
Link: <https://colab.research.google.com/drive/1U0r7JVPAiK7Ywh20igdbDI2OCPPPyYlx>
2. New Customer Lifetime Value Prediction  
Link: <https://colab.research.google.com/drive/1RJX1RT42aEYpbn6tU3C6aFfawBhmEldz>
3. GoDaddy\_Customer\_Segmentation  
Link: <https://colab.research.google.com/drive/1Beoj0iKd3DudHQZH0qAy30hHGjXxL88X>
4. Analyze AB test results  
Link: <https://colab.research.google.com/drive/16RBcFfRK7XHTHiy-F8zsJhlkNV-RgxQm>
5. Know your metrics  
Link: <https://colab.research.google.com/drive/17jbuWGXmDwlGPqS-9RYL8AyjU1IHSOdg>

### **Architecture Diagram**



**Steps to reproduce the pipeline**

1. Create Objects in Salesforce
2. Import data into Salesforce objects
3. Integrate Data into Google BigQuery from Salesforce using Blendo
4. (Do not repeat steps 1-3 for assignment 2, already covered in assignment 1)
5. Connect Data from BigQuery to Tableau for analysis that can be done directly
6. Connect Data from BigQuery to python notebooks (data that needs to be analyzed using model/algorithm) then push the data back to BigQuery and connect using Tableau to visualize