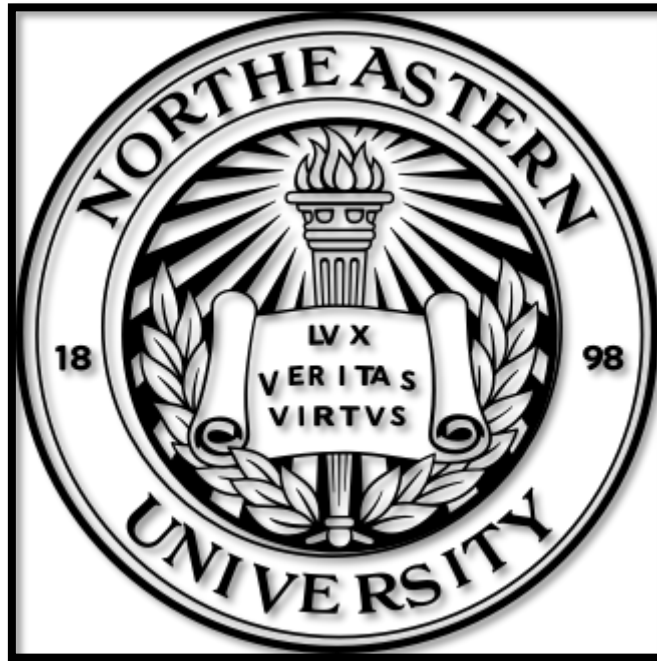


ALY6040- DATA MINING APPLICATION



Module 4 – Assignment Professor: Justin Grosz

By

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Introduction

"Iced Cube Early Sales" is a dataset that contains 514 rows and 7 columns of customer transaction data. The dataset tracks the purchasing behavior of customers, including their device purchase, capsule purchase, and the quantity of capsules they bought. Additionally, the dataset includes information about the date of purchase, whether it was the customer's first purchase, and a predicted buyer classification. This dataset provides valuable insights into the early sales performance of Iced Cube's product offerings and the purchasing behavior of its customers. By analyzing the data, businesses can gain a better understanding of their customers' preferences and develop targeted marketing strategies to increase sales. The predicted buyer classification column is particularly useful in identifying potential high-value customers, which can inform customer retention and acquisition efforts. Overall, this dataset is a valuable resource for businesses looking to optimize their sales strategies and improve customer engagement. Tableau is a powerful data visualization tool that can help businesses analyze the "Iced Cube Early Sales" dataset in a more effective and efficient way. By using Tableau, businesses can create interactive dashboards and reports that allow them to explore the data and identify patterns and trends.

For instance, companies may use Tableau to design visualizations that depict the connection between the acquisition of devices, the acquisition of capsules, and the number of capsules. They may utilize Tableau to determine which goods are the most well-liked by their clients as well as which days of the week have the biggest sales volume. Additionally, organizations may project future sales volume and discover potential high-value clients based on their purchase patterns with the use of Tableau's predictive analytics capabilities. Businesses can make wise decisions about their sales and marketing strategy and boost customer engagement by integrating the insights from the "Iced Cube Early Sales" dataset with Tableau's cutting-edge data visualization and analytics capabilities.

Tableau Representation

Before creating the tableau presentation and visualization. I have considered to answer few questions. As the representation will be answering those questions. The figure 1 answers the question who purchased maximum number of capsule and how many in number where purchased. I have considered top 10 customer and found out that customer number fifty-six purchased maximum capsules.

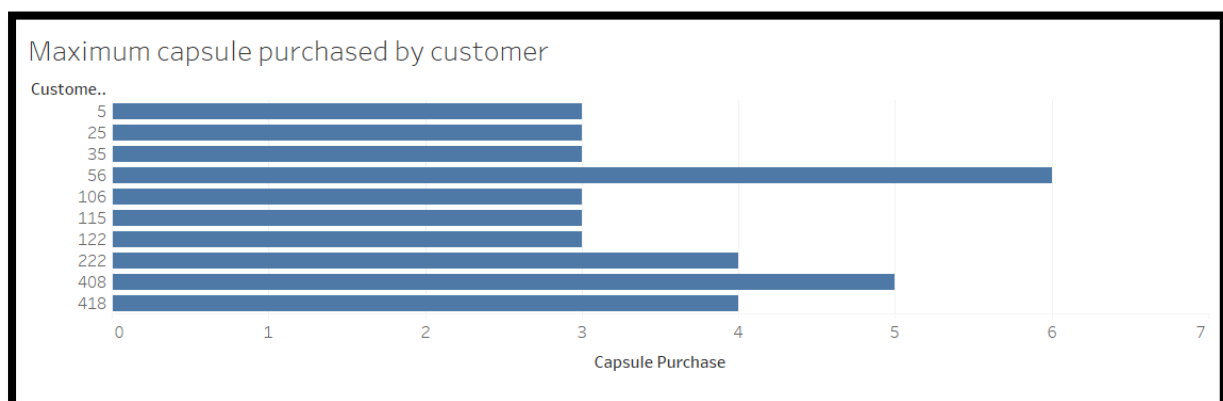


Figure 1: Maximum capsule purchased by customers.

Question 2, What should the future sales projection ?

In figure 2, the black line in the horizontal bar graph shows the predicted value and dark grey shaded shows the actual purchase of the device. However, taking the average purchase as the light grey shade can be considered as range for the future sales projection.

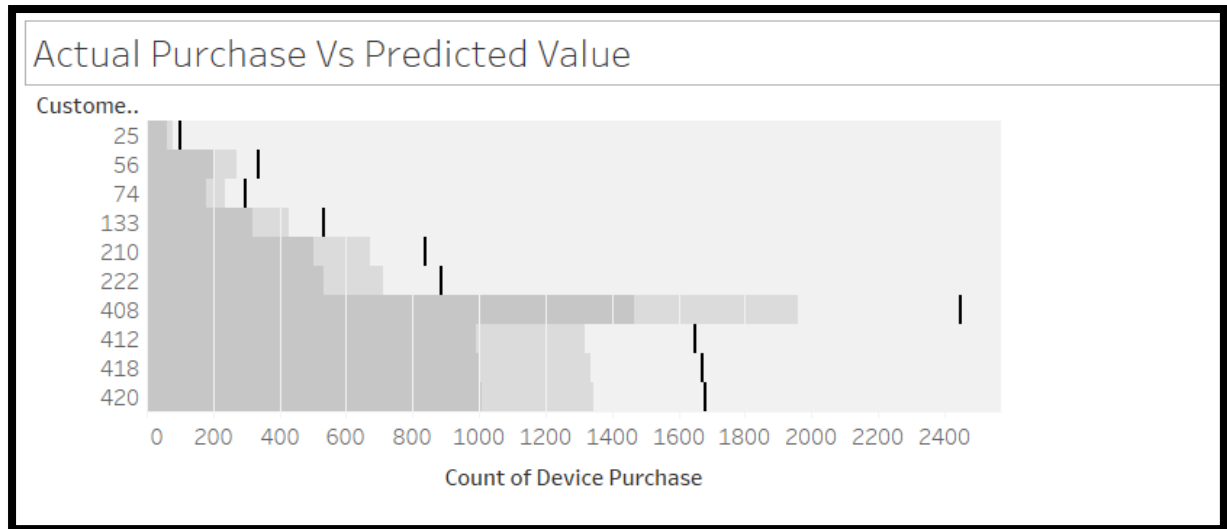


Figure 2: Actual Vs Predicted value.

Question 3, What is the trend of the purchase for the initial month?

The figure 3 shows the trend of the device and capsule purchased. November 4th has had the maximum number of capsule and device purchases as 600 and 80 respectively as per the trend line graph below.

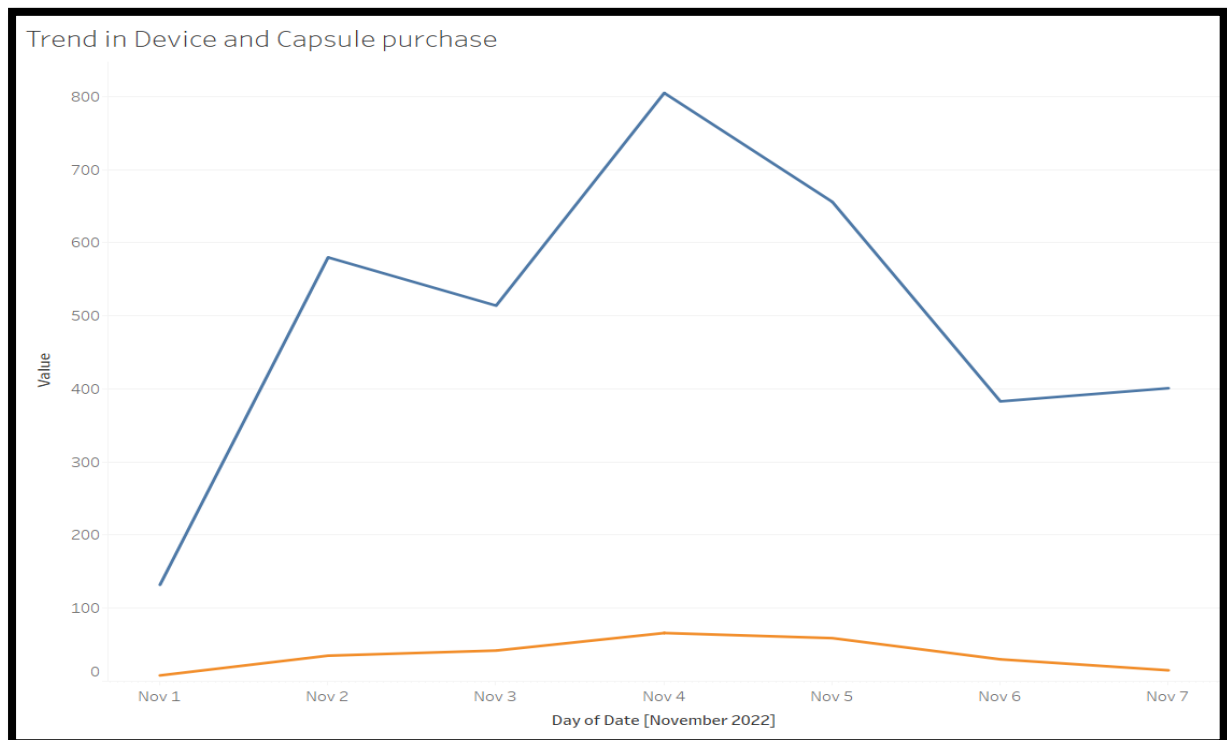


Figure 3: Trend in device and Capsule purchased.

Dashboard

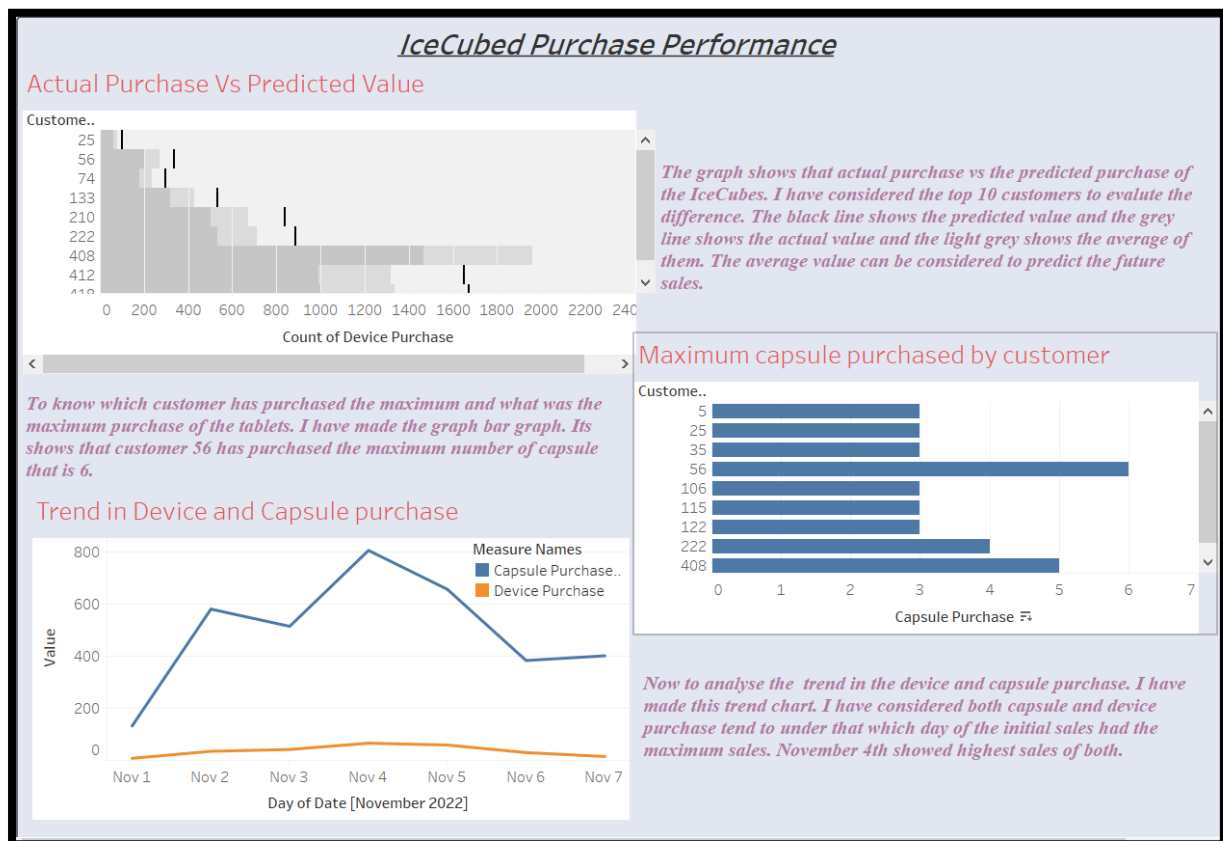


Tableau public link :- [Data Mining Assignment | Tableau Public](#)

Conclusion and Recommendation

In conclusion, companies aiming to enhance client interaction and optimize their sales methods may consider using the "Iced Cube Early Sales" dataset. The information offers details on the early sales success of Iced Cube's product offerings as well as the purchasing habits of its clients, including the devices they bought, the capsules they bought, and how many capsules they bought overall. Finding potential high-value consumers using the anticipated buyer categorization column can help guide customer retention and recruitment efforts. Businesses may use Tableau to build interactive reports and dashboards that let users examine the data and see patterns and trends. The dashboard, line graph, bar graph, and other Tableau visualizations, which show sales volume, consumer behaviour, and the link between various variables, all contain useful data.

Based on the analysis, I have observed that the customer has maximum purchased 6 capsules in the month November and total capsule sold was close to 600 and maximum device purchased is close to 100. Also, while considering the predictive models this value can be considered to understand the trend. To get future trend estimate of the next sales, I have compared actual purchase value along with the given column of predictive value in the dataset. The average trend can be considered as a rough estimate of the future sales. These values and visualizations output can be used before deciding the model output.

Reference

“Building Dashboards That Persuade, Inform, and Inspire.” Tableau, www.tableau.com/learn/series/dashboards. Accessed 12 Feb. 2023.

Taylor, David. “What Is Tableau? Uses and Applications.” Guru99.com, 12 Feb. 2023, www.guru99.com/what-is-tableau.html.