

Predicting Instacart Customers Purchasing Behaviors (When they will make their next purchase and what products to expect in that purchase)

Problem Definition

Customers are the heart of any business. Especially for companies like Instacart (mobile and web-based on-demand grocery delivery company), dependency on customers is too high. Their success entirely relies on customer experience and customer satisfaction. So, focus on customer behavior will help them keep track of their business and make strategic decisions to improve business performance from the customer perspective. Further, customer purchase behavior analysis will also help understanding customers' intention of further buying and loyalty to the company, which is crucial for business success [1]. This project aligns with this problem statement and will try to bring out valuable insights about customer's purchase behavior.

Project Objective

This project aims to analyze the Instacart purchase orders, understand customers' purchasing behavior based on their purchase history and predict when a customer will make their next order and what are the products, they might have in their next purchase order.

Dataset Description

For this project, I am going to make use of the Instacart purchase order dataset from the INSTACART website [2]. This dataset is a collection of six datasets comprising around 3 million order details, including the information about the user who made the order (UserID), the list of products in each order (ProductID), department, and aisles to which the product belongs. On the other hand, to protect the privacy of their users and their retail partners, Instacart had shared only an anonymized version of the purchase orders [3]. So, this dataset can be used freely without requiring any further processing to protect user privacy.

Further steps

In the following weeks, I will be cleaning, preparing, and exploring the data to find some patterns in customer behaviors. Finally, I will proceed with building a machine learning model to achieve the project goal.

References

1. Ben, "The Importance of Customer Satisfaction", 2017. Available: <https://www.thoughtshift.co.uk/the-importance-of-customer-satisfaction/>
2. Instacart, "The Instacart Online Grocery Shopping Dataset", 2017. Available: <https://www.instacart.com/datasets/grocery-shopping-2017> [Accessed: Jan 2, 2020]
3. Jeremy Stanley, "3 Million Instacart Orders, Open Sourced", 2017. Available: <https://tech.instacart.com/3-million-instacart-orders-open-sourced-d40d29ead6f2>