



Data Analysis with Python Project

Project Deliverables

You will be required to complete the following deliverable:

- A Python notebook with your solution.

Instructions

Background Information

Over the past few years, there has been an increase in the number of supermarkets in the most populated towns across Nepal.

As a result, competition has been heightened, and many supermarkets have seen the need to understand customers better to gain a competitive advantage.

Problem Statement

As a Data Scientist, you have been tasked with creating a Descriptive Analysis Report for one of the largest supermarkets in the Country. You will be required to perform data analysis and provide recommendations based on insights from the supermarket's performance in the previous quarter.

You can start by formulating questions that will guide you.

In addition, you have been provided with the following [guiding notebook](#).

Dataset

Dataset URL: <https://bit.ly/3ILgXwC>

Dataset Information

The dataset is one of the historical sales of a supermarket company, which has recorded 3 months of data and contains the following attributes:

- Invoice ID: Computer-generated sales slip invoice identification number.

- Branch: Branch of the supercenter (3 branches are available, identified by A, B, and C).
- Customer type: Type of customer recorded by Members for customers using a member card and Normal for customers without a member card.
- Gender: Gender type of customer
- Product line: General item categorization groups: electronic accessories, Fashion accessories, Food and beverages, Health and beauty, Home and Lifestyle, sports, and travel.
- Unit price: Price of each product in dollars.
- Quantity: Number of products purchased by the customer.
- Tax: 5% tax fee for customer buying
- Total: Total price, including tax
- Date: Date of purchase (Record available from January 2019 to March 2019)
- Time: Purchase time (10 a.m. to 9 p.m.).
- Payment: Payment used by the customer for the purchase (3 methods are available: cash, Credit card, and e-wallet).
- COGS: Cost of goods sold
- Gross margin percentage: Gross margin percentage
- Gross income: Gross income
- Rating: Customer stratification rating on their overall shopping experience (On a scale of 1 to 10)

Acknowledgments

The given dataset was sourced from the following [\[link\]](#).