

Business Data Management Capstone Project

Enhancing Profitability and Sales Growth: Data-driven Analysis and Strategies for Patanjali Chikitsalaya

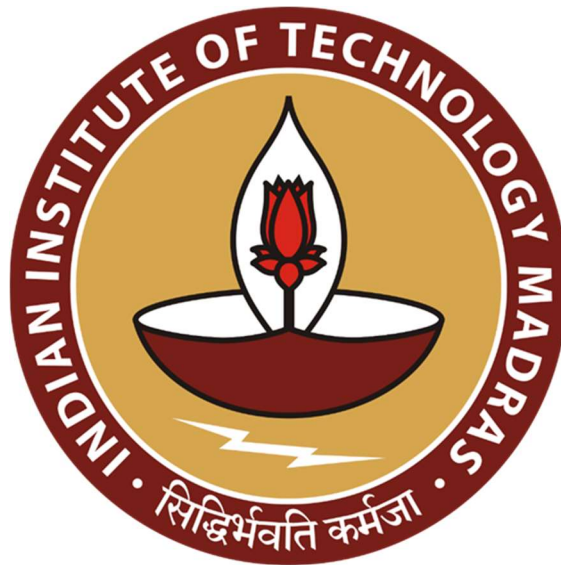
A Proposal Report for the BDM Capstone Project

Submitted by

Name: Tanmay Sharma

Roll number: 21F3001409

21f3001409@ds.study.iitm.ac.in



IITM Online BS Degree Program,

Indian Institute of Technology, Madras, Chennai

Tamil Nadu, India, 600036

1. Executive Summary

The project focuses on a Patanjali store named Patanjali Chikitsalaya, Located at Chirawa, Rajasthan. This business is B2C. Patanjali Chikitsalaya is a Patanjali Ayurveda limited franchise that sells a full range of best quality, trusted Patanjali products also the store has an Ayurvedic practitioner or Ayurvedic Vaidya, who suggests to the customer which product to take based on the ayurvedic problem they have.

During communication with the owner of the store, he was concerned the major business issue that the organization is facing are declining sales due to the ongoing recession and difficulty in managing inventory effectively. After further communication, he said that he doesn't know how to do marketing and advertisement at low and effective cost and also he doesn't have any knowledge of the software that Patanjali Ayurveda Limited has provided him for sales and inventory management.

The issue will be addressed by analyzing the data via different approaches so that I can provide the best solution.

Data about Sales for the past year should be analyzed and I will try to find the pattern and the reason for declining in sales. To solve the problem of inventory, inventory data should be collected.

Tools like Excel, tabula, and Tableau will be used to process the data. I will try to use machine learning to provide insights and suggestions for improving the business.

The expected outcome helps the organization reduce the inventory management problem and also maximize the profit of the organization.

2. Organization Background

Patanjali Ayurveda Limited was founded by Ramdev and Balakrishna in the year 2006. The company manufactures cosmetics, ayurvedic medicines, personal care, and food products. Patanjali Chikitsalaya is a franchise store of Patanjali Ayurveda Limited, the store was opened in 2016, Located in Chirawa, Rajasthan. It is a B2C type of business that sells all Patanjali products like cosmetics, ayurvedic medicines, personal care, and food products. It is mainly dedicated to medicinal products.

As the name suggests the store has its personal ayurvedic vaidya which consults the customer and assists them according to their problems. In total, the store has 2 workers including the ayurvedic practitioner. They are solely dedicated to only one outlet. The name of the store owner is Devendra Chahar.

The organization has shared the data in the hope to seek a possible solution for the problem statement provided.

3. Problem Statement

The objective of the project is:

- 1) To increase the profit and revenue of the organization.
- 2) Analyze the SKUs, which is best and which is worst.
- 3) To analyze the Inventory for better Inventory management.
- 4) To analyze the average sales per month observed in the organization for increasing the sales of the firm.
- 5) Analyze and suggest the best and cheap marketing strategy.

4. Background of the Problem

While interviewing the owner of the store, I understand that the sales are very less because of the ongoing recession as well as the competition faced by the firm. Online shopping also affects the sales of the firm as most of the loyal customers prefer to shop from their homes which is very comfortable and convenient for them and if they come to buy products, they hope for heavy discounts which are not possible, on the other hand, they get discount on the online platform in the form of coupons, sale, cashback, etc so it affects sales of the store.

They also wanted to improve inventory management. Patanjali Ayurveda Limited frequently sends extra unasked products that are not required, which are then wasted. They wanted to reduce waste by better managing their inventory.

To generate more sales and stay ahead of the curve, it is critical for them to know which SKUs are selling the most and which ones are not, as well as the trends in monthly sales. This information will allow them to make informed decisions about which products to promote, which products to discontinue, and how to allocate their marketing resources. It will also help them to identify new opportunities and to stay ahead of the competition.

5. Problem-Solving Approach

1. Increasing profit and net revenue

- **Method used**

For this problem, I will perform descriptive analysis to gain insights into the current state of the store and will calculate key metrics such as total sales, sales by product category, inventory turnover, purchase pattern, and profitability.

Compare the store performance over time(month--wise, quarter-wise) to identify any significant changes or seasonal variations. Analyze the purchasing patterns, preferences, and profitability of the different customer segments.

Also, by decreasing the order quantity of the item that contributes less than 4-5 percent to the overall revenue, it is possible to achieve a more balanced distribution and potentially increase the net margin. This analysis can be effectively conducted using a pivot table which allows for easy categorization and comparison of data.

2. Analyzing the SKUs, Inventory management

- **Method used**

To assess the performance of each SKU, we can derive insights from the monthly sales data, specifically by considering the quantity and value of the SKU traded. By evaluating the SKU's performance, we can identify the ones that contribute the most to the firm's sales. This analysis allows the firm to concentrate on maintaining adequate inventory levels for the best-selling SKUs and avoiding shortages.

The inventory turnover can be calculated using the following formula:

Inventory turnover = (Cost of Goods Sold / Average Value of Inventory)

A higher inventory turnover ratio generally indicates efficient inventory management and successful sales of the SKU.

3. Analyzing average Sales

- **Method used**

With the available sales and stock data for the fiscal year 2022-23, along with corresponding SKU prices, we can calculate the average monthly sales in terms of

volume and price, and by doing this we can understand the customer preferences, revenue affected by the factor such as festive season etc. By utilizing these methods, insights can be gained to optimize product offerings, improve targeted marketing strategies, enhance customer experience, and make data-driven decisions to drive sales growth.

Intended Data

The data I intend to collect from the firm will be sales, purchases, and inventory for the fiscal year 2022-23 from April-22 to March-23.

I will collect detailed information on sales, including the data of sale, product name, quantity sold, and revenue generated.

For inventory data, I will gather data related to inventory levels, including the quantity of each product in stock and any changes in inventory over time.

At last for the purchase data I will obtain data on purchases made by the store.

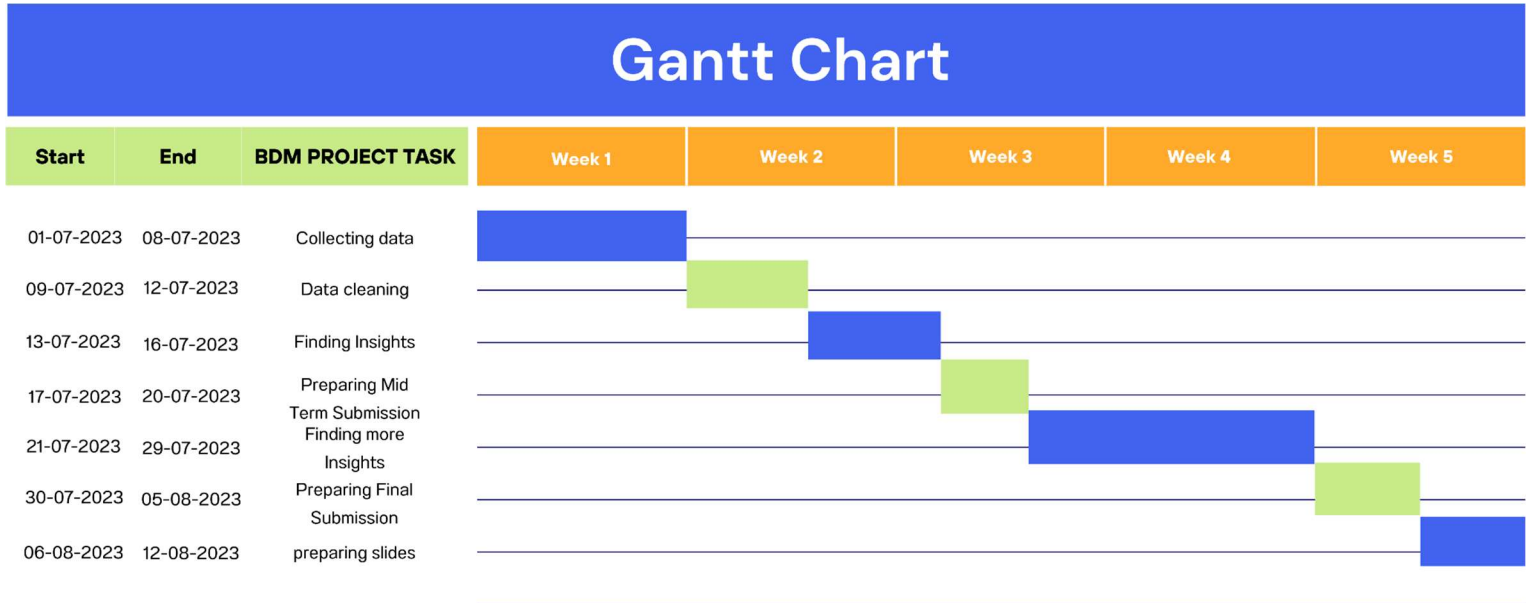
Tools for analysis

The analysis primarily relies on Excel as the data is in .xlsx format. Excel functions such as pivot tables, VLOOKUP, and graphs are commonly used to segregate and analyze data. I'm thinking of using machine learning and Tableau for identifying trendlines in sales and providing the best solution I can find to the owner of the firm.

6. Expected Timeline

1. The data collection will be for one year 2022-23 so, it will take almost one week
2. After that I will clean the Data and find insights which will take me almost one to one and half month

GANTT CHART



7. Expected Outcome

Expected outcomes are: -

- Find areas that need improvement and implement strategies to optimize pricing, reduce costs, and increase sales.
- Identify top-performing SKUs that contribute significantly to revenue. Also, identify and address underperforming SKUs by improving sales or considering discontinuation.
- Improve inventory management and better understand which products are more sold.
- Identify sales trends and factors influencing variations to develop targeted marketing and sales strategies for growth.
- Evaluate existing marketing strategies and identify cost-effective channels.