

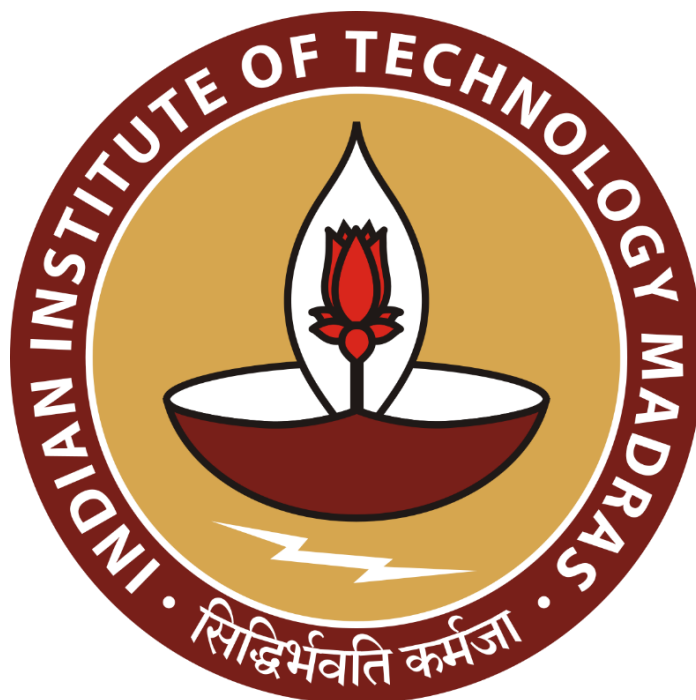
Descriptive Insights: Analyzing Trends in Medical Store

A Proposal report for the BDM capstone Project

Submitted by

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Declaration Statement

I am working on a Project titled **Descriptive Insights: Analyzing Trends n Medical Store**. I extend my appreciation to Sinha Medical Store for providing the necessary resources that enabled me to conduct my project.

I hereby assert that the data presented and assessed in this project report is genuine and precise to the utmost extent of my knowledge and capabilities. The data has been gathered from primary sources and carefully analyzed to assure its reliability.

Additionally, I affirm that all procedures employed for the purpose of data collection and analysis have been duly explained in this report. The outcomes and inferences derived from the data are an accurate depiction of the findings acquired through thorough analytical procedures.

I am dedicated to adhering to the principles of academic honesty and integrity, and I am receptive to any additional examination or validation of the data contained in this project report.

I understand that the execution of this project is intended for individual completion and is not to be undertaken collectively. I thus affirm that I am not engaged in any form of collaboration with other individuals, and that all the work undertaken has been solely conducted by me. In the event that plagiarism is detected in the report at any stage of the project's completion, I am fully aware and prepared to accept disciplinary measures imposed by the relevant authority.

I understand that all recommendations made in this project report are within the context of the academic project taken up towards course fulfillment in the BS Degree Program offered by IIT Madras. The institution does not endorse any of the claims or comments.

Abhi

Signature of Candidate

Name: Abhivyakti Jha

Date: 3/10/2024

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Executive Summary :

The store from which I am collecting data is a pharmaceutical store in the name of 'SINHA MEDICALS'. It is located in Rajnandgaon, Chhattisgarh.

The primary reasons for obtaining data from this store are:

1. The store is located in my hometown
2. I am aware of local market dynamics in that area.
3. The size and scale of the business align with my research focus.
4. My family gets their medicines from this store.
5. I am familiar with the owner & he is ready to share his store data for my project.

Data Collection:

For data collection I personally met the owner of the shop and after discussing I have collected following data using store records :

1. Product wise Sales Data
2. Purchase Return Data
3. Sales Return Data

Till date I have collected data of 6 month and I will collect more data if needed for my analysis to obtain an insightful conclusion.

Organization Background:

Name-Sinha Medicals

Owner's Name-Sant Lal Sinha

Address : Labour colony, Bajranchowk ,Tulsipur,

City-Rajnandgaon

State-Chhattisgarh

- Sinha Medical Store is a pharmaceutical store which sells prescription medicines such as antidepressant, antibiotics etc, OTC (Over the counter medicines) such as cold cough flu remedies, antacids etc, vitamins & supplements, medical devices such as BP machine, Glucometers & strips etc.
- The store was established in 2004. The owner has invested 2 lakh initially in the store and has done many improvements after that.
- Following some discussion with the owner of store & research on my part , I have analyzed that in the last few years numerous medical store got opened and the culture of home delivery mainly after covid-19 arises which results in the slight downfall of the sales which is directly affecting profit margins.



Figure 1-Store picture

| MFG | Item Particulars | Packing | Sold Qty | Gross Amount | Current Stock | Stock for Days | Avg Pe Day Sal | r e |
|-------|----------------------|---------|----------|--------------|---------------|----------------|----------------|-----|
| FDC | 1 AL SYP | 30 ML | 39 | 1331.92 | 5 | 47 | 0.11 | |
| FDC | 1 AL TAB | 10'S | 550 | 1628.45 | 60 | 40 | 1.51 | |
| FDC | 1AL M SYP | 60ML | 5 | 361.61 | 2 | 146 | 0.01 | |
| FDC | 1-AL M TAB | 10'S | 66 | 565.18 | 24 | 132 | 0.18 | |
| INDCH | 3-NITE VAGINAL SUPP. | 3'S | 1 | 140.63 | 2 | 728 | 0 | |
| LEOLI | 50 CREAM | 15GM | 4 | 321.07 | 0 | | 0.01 | |
| CIPLA | 8X SHAMPOO | 100ML | 2 | 710.65 | 1 | 182 | 0.01 | |
| CIPLA | 9PM EYE DROP | 2.5ML | 6 | 3424.97 | 0 | | 0.02 | |
| ALKEM | A TO Z DROP | 15ML | 9 | 487.29 | 1 | 40 | 0.02 | |
| ALKEM | A TO Z GOLD CAP | 15'S | 450 | 4974.58 | 15 | 12 | 1.24 | |
| ALK | A TO Z SYP 200ML | 200ML | 24 | 3376.27 | 6 | 91 | 0.07 | |
| ALKEM | A TO Z TAB | 15'S | 3057 | 22426.27 | 50 | 6 | 8.4 | |
| ARSH | A.P.BALM | 1'S | 356 | 11218.75 | 37 | 38 | 0.98 | |
| MEDWI | AAKARSHAN CREAM | 20GM | 14 | 1562.5 | 3 | 78 | 0.04 | |
| SUN | AB PHYLLINE N TAB | 10'S | 44 | 821.07 | 16 | 132 | 0.12 | |
| SUN | AB PHYLLINE CAP | 10'S | 20 | 241.07 | 20 | 364 | 0.05 | |
| SUN L | AB PHYLLINE SR 200 | 10'S | 130 | 2732.16 | 20 | 56 | 0.36 | |
| ABAR | ABACTUM CV TAB | 10'S | 62 | 2358.57 | 34 | 200 | 0.17 | |
| CORE | ABACTUM-250 TAB | 10'S | 12 | 186.43 | 50 | 1517 | 0.03 | |
| ABARI | ABACTUM-500 TAB | 10'S | 66 | 2077.96 | 16 | 88 | 0.18 | |
| HIMIL | ABANA TAB | 60 | 60 | 111.61 | 60 | 364 | 0.16 | |
| ABARI | ABBICLAV - 625 TAB | 10'S | 205 | 3819.82 | 35 | 62 | 0.56 | |
| ABARI | ABCAD TAB | 10 | 70 | 430 | 30 | 156 | 0.19 | |
| GENER | ABDOMINAL BELT NO 36 | 1'S | 7 | 3457.14 | 6 | 312 | 0.02 | |
| 11189 | AB.F.C.CAP | 10'S | 190 | 2631.34 | 20 | 38 | 0.52 | |

Figure 2-Product wise sales data

Problem Statement:

On my conversations with the store's owner and my extensive, ongoing study of the business. I discovered that the store had generated good sales and had developed positive relationships with its customers, but

- The store's profit margin has decreased from what it was previously because of online & home delivery options.

- Because shop inventory is constantly full, certain medicines expire. While some medicines have the option to be returned to the manufacturing firm, retailers nevertheless lose 25–50% of their inventory as a result.

Here, a few things can lead to the challenge:

- Inventory optimization, or analysing the stock in relation to intake and sales.
- How to increase customers if required because of increasing reach of online platforms.
- Examining the profit margin and taking measures to raise it.

Background of the Problem :

As a detailed discussion with the shop owner and as per my analysis I observed that the online markets & home delivery of products has become very popular because of which many customers has shifted towards them.

I have been regular customer to the shop since a long time and as per what I have seen ,the shop is surrounded by 3 colonies and has maintained a very good relation with the customers but still facing trouble to grow because:

- Although the shopkeeper maintains excellent records, he lacks the ability to effectively use them for inventory management, which leads to stockouts, overstocking, and expired goods.
- I have found out that numerous shops has been established in the recent years which gives good discount which results in the customers distraction.

Problem Solving Approach:

The most common kind of data I gathered was time-series data. As a result, I will have enough of room to use pivot tables' strong features to create various trend lines and scatter plots. Using the data I have gathered I may create stacked histograms and pie charts to uncover patterns. I intend to calculate important financial values in order to contribute to the solution of this issue.

Since there are many numerous products of different company, I am planning to take the data of products which are majorly contributing in the sales to make the data collection and the analysis conclusive.

The various data that have been collected for the above issues are-

- 1) Product wise sales data
- 2) Item wise sales register
- 3) Inventory data
- 4) Purchase return register
- 5) Sales return register

From the above data I am planning to calculate financial key feature such as revenue, gross profit, gross profit margin, net profit ,net profit margin, COGS(cost of goods sold), days sales of inventory,return on assets(ROA) etc.

For above features I am planning to take the data on fixed cost, variable cost , fixed assets , liabilities ,for calculating above key features.

The data collected is in the form of time-series so I will use excel for my data analysis.

The tools that are being used for entire analysis are-

- For data organisation & cleaning sort & filter, remove duplicates etc. will be used.
- For calculations SUMIFS, COUNTIF, VLOOKUP etc will be used.
- For data visualisation I am primarily using bar charts, pie charts ,trend line etc.

Expected Timeline:

I have successfully collected 3 month of data till now which I will clean, analysed and then according to which more data will be collected if needed.

Work Breakdown-Structure-

| Task | Start Date | End Date | Days To Complete |
|---------------------------------------|------------|------------|------------------|
| Received Consent | 30-09-2024 | 30-09-2024 | 1 |
| Proposal Submission | 01-10-2024 | 03-10-2024 | 3 |
| Data Collection | 05-10-2024 | 12-10-2024 | 8 |
| Finding Insights | 13-10-2024 | 21-10-2024 | 9 |
| Mid-Term Analysis & Submission | 21-10-2024 | 10-11-2024 | 21 |
| Analysis of data | 12-11-2024 | 25-12-2024 | 14 |
| Problem solving & Final Submission | 26-12-2024 | 15-12-2024 | 20 |

Gantt chart-

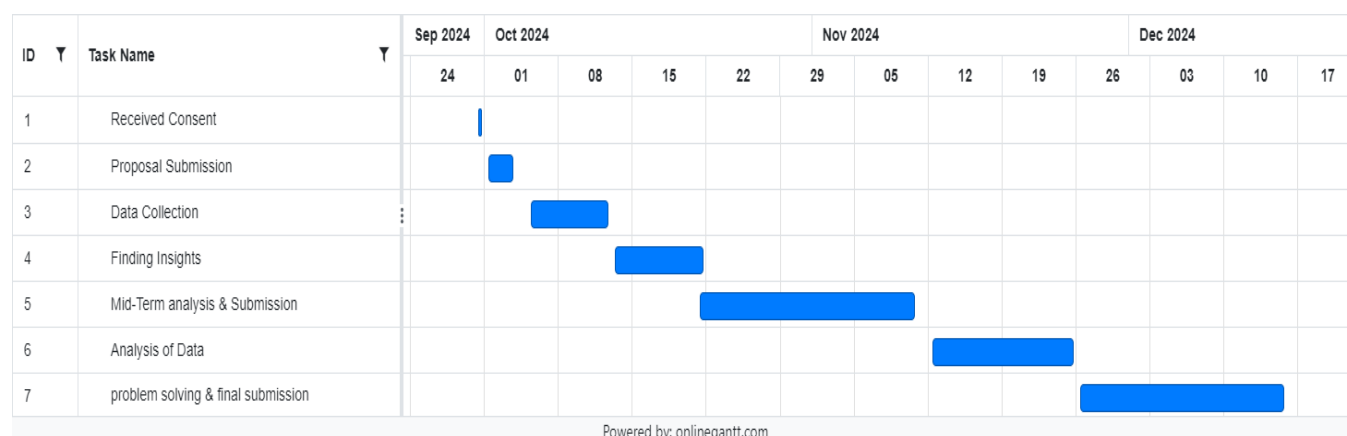


Figure 3- Expected timeline for completion of project

Expected Outcome:

1. Assist the owner in organizing the store in a better way by using charts, pivot table etc.
2. Analyse data to forecast demand trends and keep aware of stockouts or overstocking.
3. Help in making strategies to manage produces near expiration by giving discounts etc.`

