<BDM Project Proposal>Analysis Of Stationery Sales

short line

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Submitted To:  
IIT MADRAS, BDM TEAM

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# Description

The Capstone Projects, titled ‘Analysis of Stationery Sales’ is to be submitted in the interest of the Business Data Management course team of IIT Madras as a part of the Course Project for the Diploma in Data Science.

# Executive Summary & Title

This capstone project is intended to help my uncle as a stationery shop owner to understand the strategies he has to implement after analyzing sales data of over the last 3 years, and to maximize and stabilize the profit in the principal revenue he produces from selling Stationery items, and help with his sales. With the data that we have as part of the project, I will be able to help my uncle, he should choose to sell, with the amount of supplies of these items that he should sell to make profit and also help him to manage stock outs and some other business related problems.

The primary goal of this project so far is to examine the sales trends in order to improve the store’s ability to generate revenue from this category. Because of the launch of new products into the businesses, sellers constantly face the prospect of not reflecting a stable relation with customers & timely customer reviews.

The most appropriate title for this project would be "Analysis of Stationery Sales" because it focuses on resolving challenges faced by a Stationery Shop using information from trend analysis.

# Organization Background

The organization that I chose is a Stationery shop that is situated near my home, named ‘Baba Vishwanath Stationeries’. This store is located in the marketplace of Kanpur Nagar, Ramadevi. It’s one of the most reputed stationery stores and the owner Mr. Manoj Bajpai (my uncle) was kind enough in agreeing to be a part of this research project.

The shop sells a large variety of products, such as famous branded Notebooks, Books, Project items, Stationeries and a lot more, but my uncle faces the dilemma of not getting the proper feedback from their customers in stipulated time.

# Problem Statement

1. To help my uncle on deciding which Stationery product and what category to order from the suppliers.

2. To help keep the store stocked with the right amount of product so that he can run his business smoothly.

3. Suggesting complementary products to sell or freebies to give along with our primary choice of product.

# Background of the problem,

To know the problems faced by my uncle, I decided to observe the activities of the store for a month. On those days I found that the customers that visited the store had different issues that needed different products for treatment.

I observed that some products can be sold with ease, I also observed that some products can be sold with their complementary products to maximize the sales of those products. When I discussed this with my uncle, he confirmed that they do follow this strategy, but for the products that are a little costlier than the other, the customers are reluctant to spend their money on the compliments. The shop, like other stationery shops, has posters and gives out free samples of stuff like pencils, pen, sharpener, eraser, masks, etc... He wants to know which product performs superior than the others and is the highest selling. So, considering all this, a data analysis on the sales and stock of stationery in his shop will solve his current problem.

# Problem Solving Approach,

Details about the methods used:

Reasonably, my uncle’s problems can be addressed and resolved by identifying the products that generate high revenue for the shop and by finding out the average inventory days of the stationery products. And by collecting ample amounts of data on this regard, we can also track the consumer response to other such products. I will be choosing only selective products that are in the store and tracking them, the ones that the store has the data for, as some of the other products have very low preference among customers..

Details about the intended data collection:

To come up with a solution for the problems we need the daily sales details for the stock, the ending inventory and daily incoming stock details. And to collect the details of the daily incoming stock I had to seek help from my uncle.

Tracking the items at the end of the day and will be the opening stock for the next day, naturally. This will be the store’s inventory, which will be analyzed during the course of this project. As discussed above, the daily opening stock of the shop can also be determined by gathering the day-to-day closing stock. The daily sales information for stationery may also be computed since the daily sales are equal to the difference between the opening stock of today and tomorrow, which is easier than modifying the records after each purchase made.

Details about the Analysis Tools:

In this assignment, I used Google Spreadsheets mostly to analyze the collected data. All of the relevant conclusions for the problem might well be drawn using the needful Pivot Tables, Bar-Charts, Pie-Charts, and Scatter Plots. I'll also use Python's Panda profiling package to build a rudimentary report on the input Data frame. These methods will be essential for the calculations, and MS Excel will be helpful for storing and managing the collected data.

# Expected Timeline,

The data survey is planned to be done for a period of 3 Years at minimum. 3 Years of data should be sufficient to draw conclusions out of it. The start date of the data collection is Aug 2019 and it is expected to be concluded by August 2022. The timeline will be split into 3 years, i.e. we will be able to draw conclusions after analyzing the data with charts and plots at the end of every week.

# Expected Outcome

The outcome that we can expect from this project is that the suggestions that can be drawn from the research hopefully tackles the stock-out problem faced by the store-owner, keeping in mind the seasonal issue. And by tracking the day-to-day revenue, we can also find the brand of the product which receives positive feedback, and the purpose for which it is best useful. This can help my uncle as a shop owner in giving valuable advice.

**Add more details in executive summary and organisation background. Problem statements need to add more points. Furthermore, background and solving approch needs improvement. Timeline should be in the form of Gantt chart. Outcomes should be pointwise.**

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