Data Driven Operations Reflections on Karunamoyee Bastralaya

A PROPOSAL REPORT FOR THE BDM CAPSTONE PROJECT

Submitted by

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Declaration Statement

I am working on a Project Title "**Data Analysis of Karunamoyee Bastralaya**". I extend my appreciation to **Karunamoyee Bastralaya**, 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 through primary sources and carefully analyzed to assure its reliability.
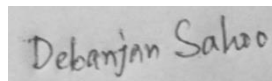
Additionally, I affirm that all procedures employed for the purpose of data collection and analysis have been duly explained in this report. The outcomes and inferences derived from the data are an accurate depiction of the findings acquired through thorough analytical procedures.

I am dedicated to adhering to the information 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 agree that all the recommendations are business-specific and limited to this project exclusively, and cannot be utilized for any other purpose with an IIT Madras tag. I understand that IIT Madras does not endorse this.

Signature of Candidate:

Name: Debanjan Sahoo

Date: 02/02/2025

1 Executive Summary and Title

Title: Data Driven Operations Reflections on Karunamoyee Bastralaya

This document is the proposal for the Business Data Management Project. The objective is to find a business and understand their existing business problem and help them to solve the problem and better grow. The Project centers on Karunamoyee Bastralaya, a small store outlet located in Gopiballavpur,Jhargram, West Bengal, which operates as a direct- to customer (B2C model) clothing Business.

About the problem :

The organization encounters significant hurdles, primarily stemming from inefficient inventory management, limited product availability, and inadequate marketing strategies due to its geographical location. These issues culminate in nominal profits, hindering the business's growth potential.

Possible approach :

The issues will be addressed by clearing the data and organizing the data. Adhering to principles of academic integrity, this analysis will culminate in recommendations tailored to support Karunamoyee Bastralaya in expanding its reach and increasing customer satisfaction within the competitive retail market.

Outcome :

The expected outcome helps Karunamoyee Bastralaya in better addressing customer needs.

- ***Inventory Management***: This data-driven approach, conducted with a commitment to academic honesty is designed to produce reliable recommendations for optimizing inventory.

- ***Sales and customers analysis***: This project aims to equip Karunamoyee Bastalaya with strategic solutions to foster sustainable growth and increased customer loyalty in a competitive market landscape.

- ***Cost Analysis***: Examining cost structures and profitability metrics to identify areas for cost reduction and revenue enhancement, ensuring sustainable growth.

➢ By using data analytics, the project will provide Karunamoyee Bastralaya with valuable insights into customer purchasing behaviours, seasonal demand shifts, and product preferences.

2 Organizational Background

Karunamoyee Bastralaya, a clothing shop located in Gopiballavpur, Jhargram-721506, West Bengal. The Store (B2C model) was established in 2020 in Jhargram , in the wake of the COVID-19 pandemic, by two enterprising brothers Mr. Sunil Pal & Mr. Soumendu Pal driven by a shared vision to contribute to their community and provide quality, affordable clothing. This store has a local fashion and needs with a modern and traditional attire, focusing on customer preferences. This project seeks to support the growth of the stores by providing data driven insights to optimization operation to serve better quality of cloths as per customer needs with a sustainable profit.

3 Problem Statements

After talking to the owner, we came to the conclusion that there are few problems that are important to be pointed out, and due to these problems business is being affected in various unwanted ways. Few major problems are:

1. **Core Problem:**

   • *Customer foot Traffic :-* The Store might struggle with attracting people, given that it's a new, small business.

   • *Brand Limitation :-* As a new store Karunamoyee Bastralaya can be quite challenging especially when it comes to gaining the visibility in the market.

   • *Online Shopping :-* Most of the people are now shopping online so it could harder for small business to attract people. That's why small business is facing increased many challenges to compete.

   • *Local market competition :-* In This area, there are many clothing Stores so, it is a challenge to customer acquisition and make a position in market.

2. **Decline in Revenue and Limited Wholesale Customers**

   Issue : Revenue generation is falling short of expectations and difficulty in attracting wholesale customers.

3. **Post Covid-19 Inventory Issue:**

   Inventory Problem- Due to the pandemic situation, the store might face delays and increased costs when restocking the items.

4 Background of the Problem

- The store, despite its strategic location and competitive pricing, is experiencing a decline in revenue due to increased competition, shifting consumer preferences, supply chain disruptions, inadequate marketing, and broader economic factors.
- This store faces challenges in effectively managing the inventory and without careful planning sometimes the store might over purchase items that don't sell quickly.
- As a new business, this store may have limited customers insights to buying patterns so sometimes customers demand are fluctuating.
- It's a new small business so sometimes may have facing problem when dealing with the customers and their bargaining.

5 Problem Solving Approach

This business keeps records day wise. I collected the data from 2021 to the present . Since the period of data is long, the monthly analysis makes sense. Also I analyze the year wise trend.

The proposed plan :

1. **Sales & Profits Over Time**:
Track how sales and profits change throughout the year, and see which product groups are driving the most activity. we can even zoom in on specific months and product groups for even deeper insights.

2. **Customers Trend:**
Understand our customers better with a dashboard that shows how each one contributes to sales and profits. So we will even see where our customers are located, helping us to tailor our marketing efforts.

3. **Improvement of Marketing Strategies:**
Creating a meaningful and impactful Poster for Social Media (like Fb, Insta etc) to showcase unique products, price and store location to attract the customers.

4. **Discount on Products:**
➢ Discount strategies base on data analysis to attract more customers and improving sales.
➢ Identify the suitable products for discounts to drive the sales while maintaining profit.

5. **Customer Feedback System:**
● Implement a customer feedback system to gather insights on product quality and availability.
● Utilize feedback data to enhance product offerings, improve customer satisfaction, and drive repeat business.

Data Collection :

I began collecting data on January 2nd and approached them to share the required information regarding business problems.

- **Collect the data :**
  1. Received Excel files containing clothing data in a consolidated format.
  2. Obtained separate sales data les categorized by year.

- **Cleaning the raw data:**
  Requested profit details for each product group since not all purchase data files were shared. Selected relevant columns from the received raw data. Performed data transformations, including cleaning, impute missing values, and ensuring uniform data types.
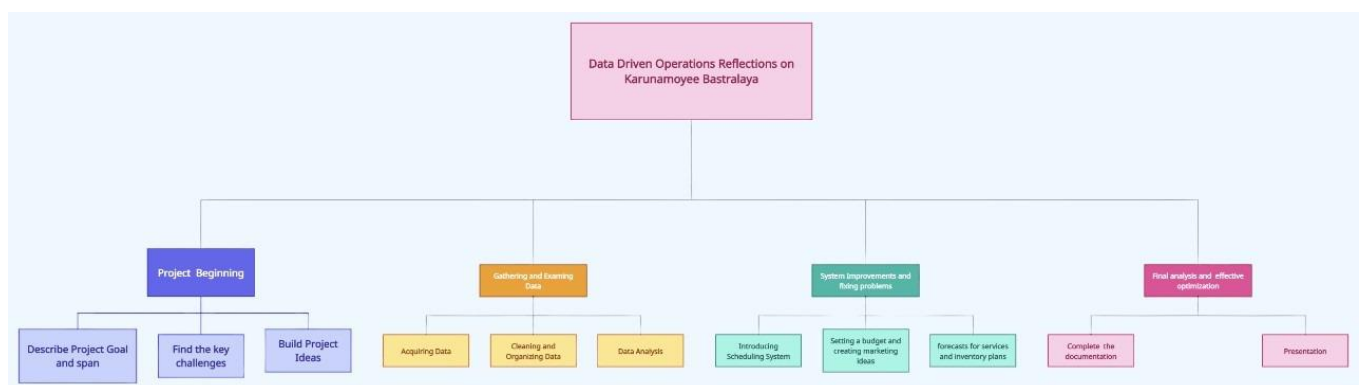
- **Analyse the data:**
  Constructed a final data frame suitable for analysis, incorporating the refined data.

Tool :

I will use Excel Sheet to Data Preprocessing and construct a final data frame for an online platform .

# 6 Expected Timeline

6.1 Work Breakdown Structure :

6.2 Gnatt Chart Representation:

Expected Timeline

Task	Start Date	End Date	Duration
Data Collection	06/01/2025	15/01/2025	10
Data Preprocessing /Data Transformation	14/01/2025	22/01/2025	9
Proposal Writing	23/01/2025	29/01/2025	7
Proposal submission	01/02/2025	03/02/2025	3
Preparing for mid-term Submission	06/02/2025	08/02/2025	3
Preparing for Data Interpretation + Final Submission	11/02/2025	13/02/2025	3

Project Timeline
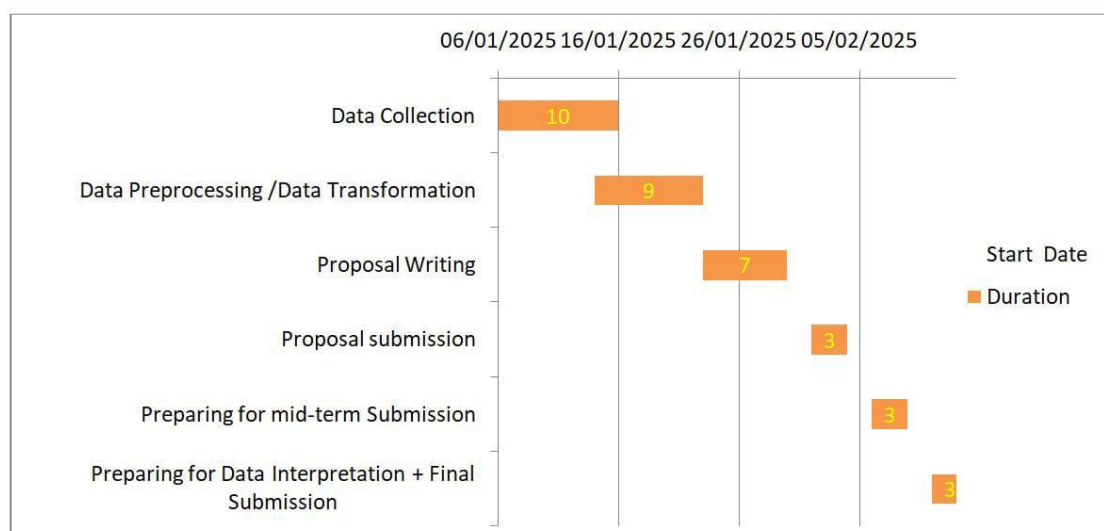
7 Expected Outcome

- Learning to understand the business problems in depth and analyze the problem background.
- Analyze the previous data and try to reach the target of the owner.
- All this information helps to go for better growth of the organization in future and avoid the cause of the problems.
- In this way the organization will run successfully in future.