

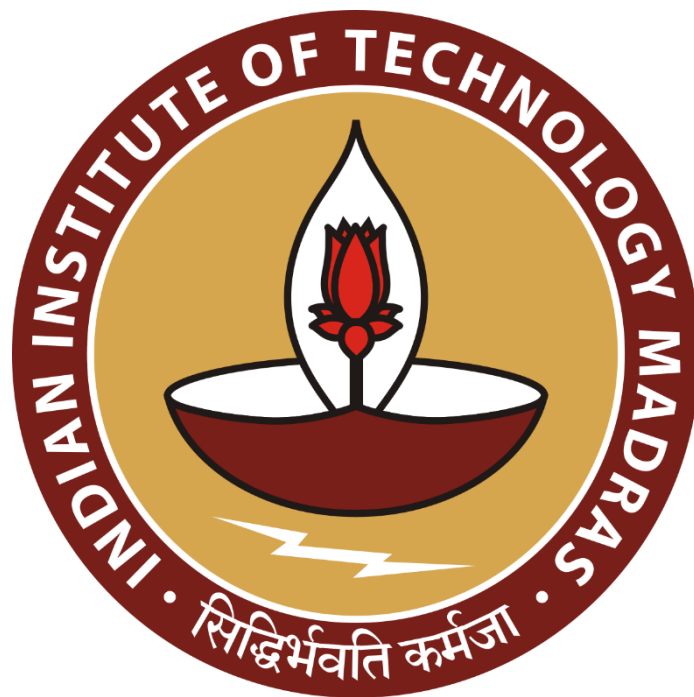
# **Optimizing Delivery Process and Increasing Sales through Personalized Marketing: Target Corporation Case Study**

**A proposal report for the BDM capstone project**

Submitted by

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### **Declaration Statement**

I am working on a project titled “Optimizing Delivery Process and Increasing Sales through Personalized Marketing: Target Corporation Case Study”. I would like to thank Devaraj V for making the Target dataset available on [Kaggle](#), which was instrumental in completing this 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 secondary sources and carefully analysed 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 fulfilment in the BS Degree Program offered by IIT Madras. The institution does not endorse any of the claims or comments.

Signature of candidate: 

Name: Kamal Kishor Chaurasiya

Date: 10/12/2024

## **1. Executive Summary**

The project focuses on conducting a comprehensive analysis on the dataset from Target's operations in United States to identify and then develop strategies to solve the problems faced by the organization. The business is a B2C (Business-to-Consumer) company operating in the retail segment, primarily focusing on delivering products directly to end consumers.

The company has been facing several issues in the operations, particularly with optimizing the delivery process and increasing sales, which have impacted customer satisfaction and overall revenue growth.

To address the issues of optimizing the delivery process and increasing sales, this project will leverage data analysis and visualization tools like MS Excel and Python to derive actionable insights. I will use the data to identify the obstacles in delivery process and subsequently propose solutions to optimize it. Next, I will perform customer segmentation and product affinity analysis that will help to tailor marketing strategies for specific products and customer groups.

The expected outcomes obtained through data-driven methodologies will help to optimize the delivery process and increase the sales performance, ultimately enhancing the company's competitive edge.

## **2. Organization Background**

Target Corporation is a globally recognized brand and one of the leading retailers in the United States. Founded in 1962 and headquartered in Minneapolis, Minnesota, Target has earned a reputation for offering exceptional value, inspiration, and innovation. With its iconic red bullseye logo, the company is synonymous with providing a unique shopping experience that combines affordability with quality and style.

Target operates a wide network of stores across the U.S. and has a robust online presence to cater to diverse customer needs. It offers a broad range of products, including apparel, home goods, electronics, groceries, and more. Known for its "Expect More, Pay Less" promise, Target focuses on delivering convenience, trend-forward merchandise, and exclusive brand partnerships.

### **3. Problem Statement**

This project focuses on two key challenges: improving delivery and shipping efficiency and enhancing personalized marketing strategies. Through the analysis of delivery times, regional data, and payment methods, the aim is to identify logistics inefficiencies and optimize resource distribution. Additionally, customer segmentation, product affinity analysis, and sentiment evaluation will be utilized to create tailored product recommendations and targeted marketing campaigns, boosting customer satisfaction and loyalty, resulting in increased sales.

### **4. Background of the Problem**

The challenges of optimizing delivery and shipping efficiency and enhancing personalized marketing strategies stem from various factors affecting Target's operations. Delivery and shipping delays negatively impact customer satisfaction, often caused by inefficiencies in logistical operations, resource allocation, and supply chain disruptions. Key contributors include inconsistent shipping times across regions, limited tracking of delivery provider performance, and payment processing delays. These issues arise due to a lack of robust data analysis, unoptimized delivery routes, and varying regional infrastructure. Internal challenges include inefficient resource distribution and inadequate real-time logistics monitoring, while external challenges involve regional transportation difficulties, vendor performance issues, and disruptions like weather or strikes.

Similarly, the lack of effective personalized marketing strategies leads to missed opportunities for increased sales and customer retention. This results from limited understanding of customer behaviour, inadequate product recommendation systems, and underutilized customer feedback. Addressing these issues requires advanced customer segmentation and targeted marketing, as well as improvements in data-driven decision-making to enhance customer satisfaction and operational efficiency.

## **5. Problem Solving Approach**

To address the challenges of optimizing delivery and shipping performance and enhancing personalized marketing strategies, a structured, data-driven approach will be adopted to extract actionable insights and implement improvements.

### **Optimizing Delivery and Shipping Performance**

The primary objective is to minimize delivery delays and improve shipping efficiency by analysing patterns in delivery times, regional shipping performance, and payment methods. Delivery time analysis will involve calculating the duration between order placement and delivery to identify average delivery times and regions experiencing consistent delays. This will help highlight logistics bottlenecks and inefficiencies.

Geospatial analysis will be performed to link customer locations with delivery outcomes. Mapping delivery delays across regions will enable targeted improvements in logistical operations. Additionally, analysing the relationship between payment methods and processing times will provide insights into whether certain payment types are contributing to slower order fulfilment. Evaluating the performance of vendors and delivery providers will also help identify underperforming entities contributing to delays. Insights gained will guide strategies such as optimizing delivery routes, allocating additional resources to high-delay regions, and improving vendor selection processes.

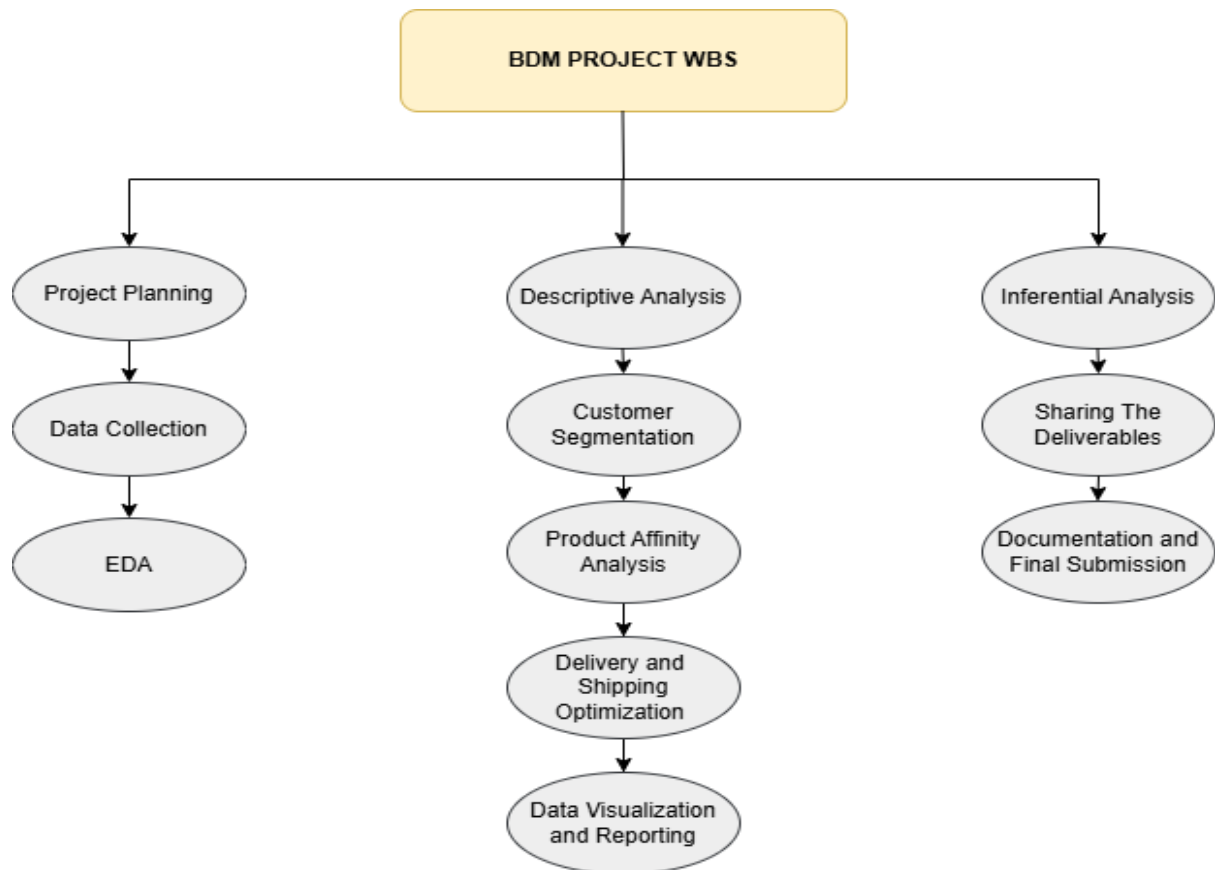
### **Increasing sales through Personalized Marketing Strategies**

Improving customer retention and boosting sales requires understanding customer preferences, purchasing patterns, and feedback. Customer segmentation will be performed by grouping customers based on purchase frequency, order size, and product preferences. This segmentation will enable targeted marketing campaigns tailored to the needs of specific customer groups.

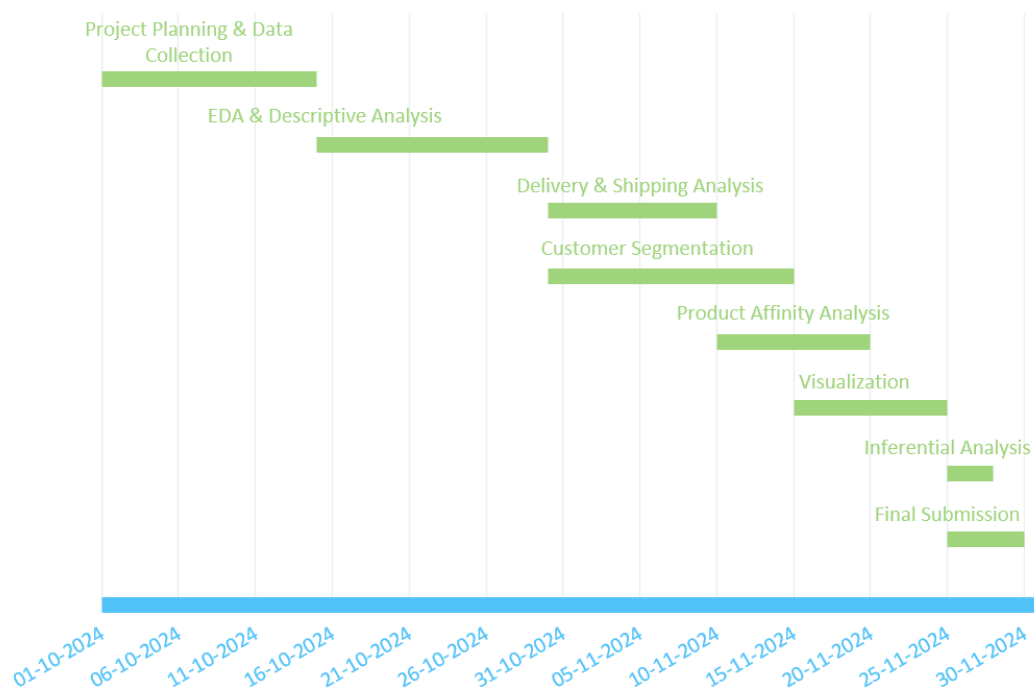
Product affinity analysis will identify items frequently purchased together, providing insights for recommendation systems to suggest complementary products to customers. Additionally, sentiment analysis on customer feedback will uncover key sentiments and their association with products, helping refine product offerings and marketing messages. Regional preferences will also be analysed to tailor marketing strategies to specific areas, enhancing the relevance and effectiveness of campaigns.

## 6. Expected Timeline

### Work Breakdown Structure (WBS)



### Gantt Chart



## **7. Expected outcomes**

At the completion of this project, the expected outcomes include a thorough identification of logistics bottlenecks, resulting in reduced delivery delays and improved shipping efficiency across various regions. By analysing delivery times and correlating them with geographical and payment data, optimized resource allocation strategies will be developed to enhance operational performance.

Customer segmentation and personalized marketing insights will enable more effective targeting, refining marketing campaigns to address specific customer preferences and behaviours. Product affinity analysis will uncover frequently purchased product combinations, facilitating better cross-selling opportunities and tailored recommendations.

These comprehensive solutions will not only streamline delivery processes but also enhance the customer experience. Overall, the combined impact of these solutions aims to contribute significantly to revenue growth by boosting operational efficiency, increasing sales through targeted marketing, and building stronger customer relationships.