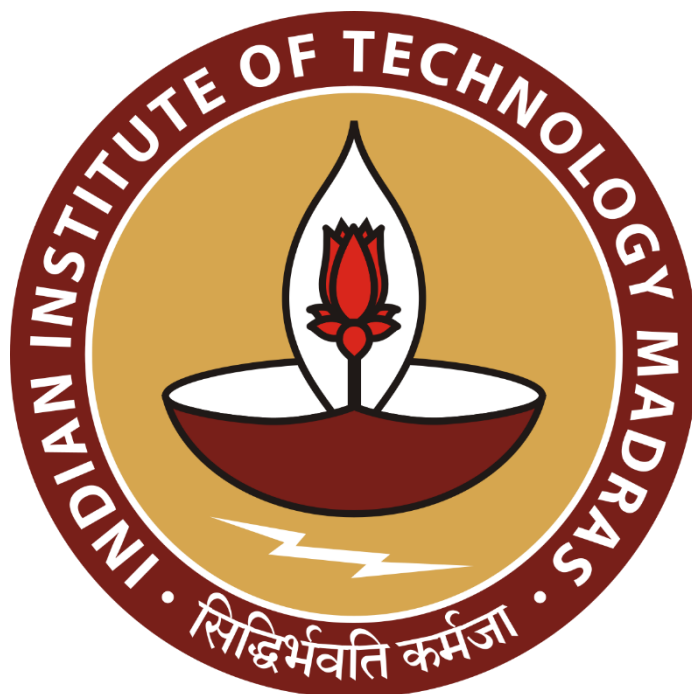**Title : Transforming Jaiswal Cycle Stores: Data Strategies for Bicycle Retail Success.**

A Proposal report for the BDM capstone Project

Submitted by

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1 Executive Summary and Title

Jaiswal Cycle Stores, situated in Kunwar Singh Chowk, Main Road Jainagar, Madhubani-847226, has been a trusted hub for bicycle enthusiasts, catering directly to the community's demand for eco-friendly and affordable transportation. As a B2C (business-to-consumer) establishment, the shop serves individual customers, providing them with bicycles and related accessories. Despite its reputable standing, the shop encounters challenges, including a decline in bicycle sales due to the rising popularity of motorized options and seasonal disruptions leading to reduced sales during the rainy season.

This capstone project aims to address these challenges through a data-driven approach, specifically focusing on the preferences of individual customers. By analyzing customer preferences, market trends, and historical sales data, the project aims to implement strategic interventions, such as targeted marketing campaigns and optimized inventory management. These initiatives aim to not only counteract the impact of declining bicycle sales and seasonal fluctuations but also to position Jaiswal Cycle Stores as the preferred destination for high-quality bicycles among individual consumers. The goal is to thrive in the dynamic B2C landscape by adeptly adapting to evolving consumer needs and ensuring long-term profitability.

2 Organization Background

Established in 1990 by visionary commerce graduate Nand Kumar Jaiswal, Jaiswal Cycle Stores stands as a cornerstone in the bicycle retail industry, located at Kunwar Singh Chowk, Main Road Jainagar, Madhubani-847226. Rooted in a commitment to eco-friendly transportation, the shop has actively promoted cycling culture in the community. Nand Kumar Jaiswal's dedication to providing reliable and affordable bicycles has garnered a reputation for excellence.

Built on customer trust and quality commitment, Jaiswal Cycle Stores remains a preferred destination for cycling enthusiasts. The shop's legacy, rooted in Nand Kumar Jaiswal's entrepreneurial spirit, evolves with the changing dynamics of the bicycle market. The Business Data Management Capstone Project aims to leverage data-driven insights, navigating challenges, and reinforcing the shop's position as a leading bicycle retailer. Through strategic analysis, we aspire to uphold the values and legacy that define Jaiswal Cycle Stores.

3   Problem Statement

1. **Declining Bicycle Sales:** Jaiswal Cycle Stores faces a challenge of declining bicycle sales, attributed to the growing popularity of motorized alternatives. This shift in consumer preference threatens the shop's market share and calls for strategic interventions to revitalize bicycle sales.

2. **Seasonal Sales Fluctuations:** The business experiences a notable drop in sales during the rainy season, lasting for 2-3 months. This seasonal fluctuation poses a financial challenge for Jaiswal Cycle Stores, necessitating a targeted approach to mitigate the impact of weather-related customer unavailability.

4   Background of the Problem

Jaiswal Cycle Stores confronts a pivotal challenge marked by diminishing bicycle sales, primarily triggered by the surging popularity of motorized alternatives. Factors influencing this shift include increased urbanization, evolving lifestyles, and the perception of bikes as less contemporary modes of transportation.

Internally, the shop contends with inventory management issues, stemming from technological advancements leading to surplus older models. This internal hiccup impedes stock turnover, affecting profitability and necessitating a data-driven inventory optimization strategy.

Externally, the business grapples with seasonal fluctuations, experiencing a substantial drop in sales during the 2-3 month rainy season. This external challenge strains finances, prompting the need for targeted strategies to counteract weather-related sales variations.

Additionally, the rising popularity of bikes poses external competition. To stay competitive, the shop must counter this trend through innovative marketing, enhanced product differentiation, and community engagement to underscore the benefits of traditional bicycles.

In essence, Jaiswal Cycle Stores' declining sales result from internal inventory management challenges and external factors like changing consumer preferences and seasonal fluctuations. Addressing these issues mandates a comprehensive approach integrating data analytics, strategic marketing, and community engagement, positioning the shop for sustained success in a dynamic market.

5 Problem Solving Approach

Addressing the operational challenges encountered by Jaiswal Cycle Stores necessitates a holistic, data-driven strategy. To surmount these obstacles, we will implement several key initiatives:

Our primary focus is the introduction of a real-time customer management system. This system will monitor customer flow, predict peak periods, and optimize staff allocation during busy hours, ultimately reducing wait times and elevating the overall shopping experience.

Subsequently, tailored demand forecasting models for bicycles will be developed, leveraging historical sales data and advanced analytics. This will lead to improved inventory planning, minimizing overstocking, and reducing wastage while ensuring consistent product availability.

Efficient replenishment strategies will be instituted, incorporating reorder points and quantities based on demand patterns, lead times, and product shelf life. Establishing robust supplier relationships will ensure timely replenishment. Centralizing data from sales records, customer feedback, and supplier information will empower data-driven decision-making, identifying trends, optimizing pricing, and enhancing overall store efficiency.

To boost customer satisfaction and loyalty, customer engagement initiatives such as loyalty programs, targeted promotions, and personalized recommendations based on customer preferences and purchase history will be implemented.

Recognizing the pivotal role of well-trained staff, comprehensive training programs covering customer service, inventory management, and data utilization will be introduced. The integration of modern technology solutions, including inventory management software, point-of-sale systems, and analytics tools, will provide real-time insights and automate various aspects of inventory and customer management.

Our chosen tech stack includes MS Excel and Google Sheets for data gathering and entry, Google Colab utilizing Python libraries like NumPy and Pandas for data cleaning and framing,

and MS Excel along with Data Analysis Tools for in-depth analysis. Visual tools such as Pareto charts and histograms will also be employed to analyze stock and sales data.

Finally, a continuous monitoring and feedback loop will be established to track the effectiveness of these strategies, allowing for adjustments and refinements to ensure alignment with evolving customer needs and market conditions.

Through this comprehensive approach, Jaiswal Cycle Stores aspires to systematically address operational challenges, becoming a beacon of efficiency and customer satisfaction in the local bicycle retail landscape of Kunwar Singh Chowk, Main Road Jainagar, Madhubani. The goal is to mitigate existing issues and drive sustained growth.

6 Expected Timeline

6.1 Work Breakdown Structure:

Project Initiation: Define project scope and objectives.

Data Gathering and Preparation: Collect historical sales data, customer feedback, and supplier information using MS Excel and Google Sheets.

Real-Time Customer Flow Management: Predict peak hours and optimize staff allocation to enhance the shopping experience.

Demand Forecasting for Bicycle Sales: Utilize historical sales data and advanced analytics (Google Colab) to optimize inventory planning.

Efficient Inventory Replenishment: Set reorder points and quantities based on demand patterns, building strong supplier relationships.

Project Evaluation and Closure: Assess project outcomes, ensure objectives are met, and prepare a project closure report.

Project Documentation and Reporting: Document all project activities, share insights, and communicate lessons learned.
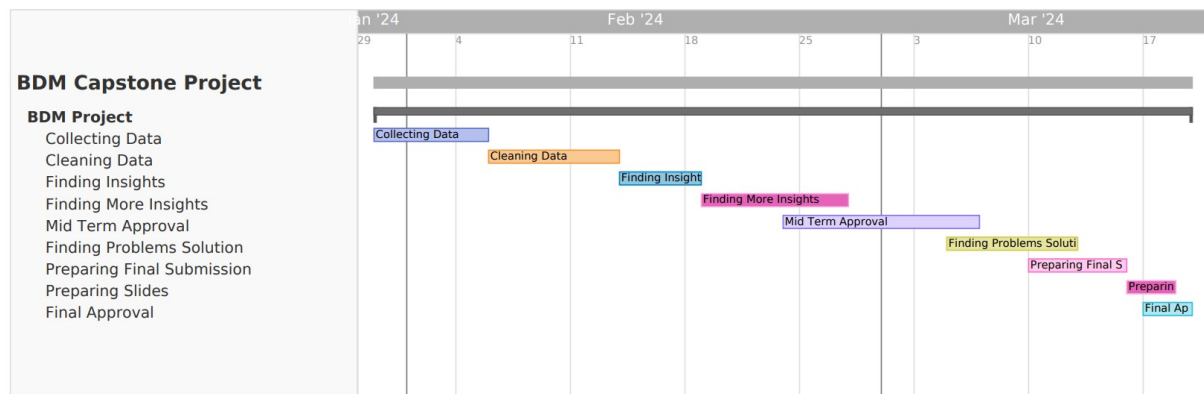
6.2   Gantt chart

Figure 1 Expected timeline for completion of project.

7   Expected Outcome

The anticipated outcomes for Jaiswal Cycle Stores following the implementation of the proposed strategies include enhanced inventory planning and a comprehensive understanding of product sales patterns. By leveraging historical sales data and advanced analytics, the project aims to minimize overstocking, optimize product availability, and identify trends in customer preferences.

Furthermore, the project aims to address the challenges associated with seasonal fluctuations and declining bicycle sales. By implementing a real-time customer flow management system, the goal is to reduce wait times during peak hours, ultimately improving the overall shopping experience and customer satisfaction.

Efficient inventory replenishment strategies, including setting reorder points based on demand patterns, will contribute to minimizing stock-related challenges. This, coupled with strong supplier relationships, ensures timely replenishment and effective stock management.

The project also seeks to provide insights into customer behavior, allowing for targeted marketing initiatives and personalized engagement. By understanding customer preferences through loyalty programs and targeted promotions, Jaiswal Cycle Stores aims to bolster customer satisfaction and loyalty.

In summary, the expected outcome encompasses improved inventory management, reduced wait times, increased customer satisfaction, and a strengthened competitive position for Jaiswal Cycle Stores in the dynamic bicycle retail market of Kunwar Singh Chowk, Main Road Jainagar, Madhubani.