

Ideation Phase

Defining the Problem Statements

Date	26-09-2023
Team ID	1289
Project Name	Product Sales Analysis

PRODUCT SALES ANALYSIS

Problem Definition and Design Thinking:

Project Definition:

The project involves using IBM Cognos to analyze sales data and extract insights about top selling products, peak sales periods, and customer preferences. The objective is to help businesses improve inventory management and marketing strategies by understanding sales trends and customer behaviour. This project includes defining analysis objectives, collecting sales data, designing relevant visualizations in IBM Cognos, and deriving actionable insights.

Design Thinking:

Analysis Objectives:

1. Identifying Top-Selling Products:

- Query the sales data to calculate the total sales volume and revenue generated for each product.
- Create a ranked list of products based on their sales performance.
- Visualize the top-selling products using bar charts or tables to make them easily accessible.

2. Analyzing Sales Trends:

- Aggregate sales data by time intervals (e.g., months or quarters) to identify seasonal trends.
- Use line graphs or time series charts to visualize sales trends over time.
- Apply statistical techniques to identify significant changes or anomalies in sales patterns.

3. Understanding Customer Preferences:

- Merge customer demographic data with sales data using common identifiers.
- Group customers into segments based on demographics (e.g., age groups, gender, location).
- Analyze the purchasing behaviour of different customer segments to understand their preferences.

Data Collection:

- Retrieve transaction records from your sales database or point-of-sale systems.
- Verify data accuracy and completeness, addressing any missing or erroneous records.

Product Information:

- Access product information from your inventory management system or product database.
- Ensure product data is up-to-date, including descriptions, categories, and pricing.

Customer Demographics:

- Collect customer demographic data through surveys, customer profiles, or CRM systems.
- Maintain data quality by regularly updating and validating customer information.
- Visualization Strategy: Crafting Effective Visuals

Interactive Dashboards:

- Design interactive dashboards in IBM Cognos that provide an overview of key sales metrics.
- Include filters and drill-down options to allow users to explore data interactively.

- Use charts, graphs, and tables to present data in a visually appealing and user-friendly manner.

Customizable Reports:

- Create customizable reports that cater to specific stakeholder needs.
- Design templates for reports that can be easily populated with up-to-date data.
- Ensure that reports are well-organized and include relevant visuals and key insights.

Visual Storytelling:

- Craft a narrative that guides users through the analysis and insights.
- Use data visualizations to support the storytelling process, emphasizing key findings.
- Create compelling data-driven stories that convey the impact of the insights on business strategies.
- Actionable Insights: Guiding Decisions

Inventory Management:

- Recommend inventory adjustments based on sales trends. For example, increase stock of top-selling products during peak seasons.
- Implement automated inventory tracking systems to prevent stockouts and overstock situations.
- Continuously monitor inventory turnover rates and adjust purchasing strategies accordingly.

Marketing Strategies:

- Allocate marketing budgets to campaigns that have shown the highest return on investment (ROI) based on analysis.
- Refine targeting by tailoring marketing messages to customer segments with identified preferences.

- Monitor the effectiveness of marketing campaigns in real-time using dashboards and adjust strategies accordingly.

Product Development:

- Prioritize product development efforts based on the popularity of certain product categories or features.
- Gather customer feedback through surveys or reviews to inform product enhancements.
- Implement agile development processes to respond quickly to changing customer preferences.

Pricing Strategies:

- Adjust pricing strategies for underperforming products or categories to boost sales.
- Implement dynamic pricing models that respond to real-time market demand.
- Continuously analyze price elasticity and adjust pricing accordingly to maximize profitability.

Conclusion:

In conclusion, a structured approach to "Product Sales Analysis" using IBM Cognos involves setting clear analysis objectives, meticulous data collection, crafting effective data visualizations, and using actionable insights to drive strategic decisions across inventory management and marketing strategies. These actionable steps empower businesses to thrive in a competitive market environment and adapt to changing customer preferences and market dynamics.