

Project statement:

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 behavior. This project includes defining analysis objectives, collecting sales data, designing relevant visualizations in IBM Cognos, and deriving actionable insights.

Design Thinking:

Analysis Objectives: Define the specific insights you want to extract from the sale data, such as identifying top-selling products, analyzing sales trends, and understanding customer preferences.

Data Collection: Determine the sources and methods for collecting sales data, including transaction records, product information, and customer demographics. **Visualization Strategy:** Plan how to visualize the insights using IBM Cognos to create interactive dashboards and reports.

Actionable Insights: Identify how the derived insights can guide inventory management and marketing strategies.

Project Initiation:

This type of sales analysis looks for patterns in sales data. Use it to track your team's progress towards its sales goals, while simultaneously understanding sales patterns in specific products, customers, and/or geographies

Predictive sales analysis:

This type of sales analysis is designed to help you predict future risks and opportunities. Use it to create accurate sales forecasts.

Machine Learning Model Selection:

Choose appropriate machine learning algorithms for your prediction tasks. For sales trends, time series forecasting models like ARIMA, Exponential Smoothing, or more advanced models like Prophet or LSTM can be useful. For customer behavior, classification and regression algorithms like logistic regression, decision trees, random forests, or gradient boosting are commonly employed.

Visualization of Predictions:

Create visualizations for the machine learning predictions to make them easily understandable to business stakeholders. Highlight predicted trends and behavioral insights in your reports and dashboards.