

Business Analytics Projects

Project 1 – Retail Sales & Performance Analytics

Project Objective: Analyze overall retail business performance to improve revenue, profitability, product performance, and store efficiency through data-driven insights.

Business Problem: Business revenue is declining despite healthy customer traffic. Management wants to identify key performance issues and recommend actionable improvements.

Business Goal: Increase Revenue, Profit, Average Order Value (AOV), Units per Transaction (UPT), Product Sales, and Store Performance.

Business Domains Covered: Sales Analytics, Retail Analytics, Product Analytics, Store Analytics, Inventory Analytics, Financial Analytics

Dataset Size: 1,000 Retail Sales Records including Customers, Orders, Products, Stores, Inventory, Promotions, and Calendar

Data Sources: Customer Master, Product Master, Orders, Store Details, Inventory, Promotions, Calendar

Excel Activities: Data Cleaning, Remove Duplicates, Flash Fill, Text Functions, Lookup Functions, Pivot Tables, Pivot Charts, Conditional Formatting, Interactive Dashboard

SQL Activities: Data Extraction, Filtering, Aggregations, Joins, CASE WHEN, Subqueries, CTEs, Window Functions, Sales Trend Analysis, Product Analysis, Inventory Analysis

Power BI Activities: Data Modeling, Relationships, DAX Measures, KPI Cards, Interactive Dashboard, Drill Through, Bookmarks, Dynamic Filters

Business KPIs: Revenue, Orders, Profit, Profit Margin, Quantity Sold, Average Selling Price (ASP), Average Transaction Value (ATV), Average Order Value (AOV), Units per Transaction (UPT), Conversion Rate

Advanced KPIs: Store Productivity, Category Contribution, Regional Growth, Product Performance, Inventory Turnover, Stock Availability

Business Analysis Performed: Sales Trend Analysis, Product Performance Analysis, Category Analysis, Store Performance Analysis, Regional Analysis, Inventory Analysis, Root Cause Analysis

Visualizations Developed: KPI Cards, Line Charts, Bar Charts, Column Charts, Maps, Tree Maps, Waterfall Charts, Matrix Tables, Heat Maps

Statistical Techniques: Trend Analysis, Growth Rate Analysis, Moving Average, Variance Analysis, Correlation Analysis

Business Frameworks Used: SWOT Analysis, Fishbone Diagram, Pareto Analysis, KPI Tree, 5 Why Analysis

Business Recommendations: Improve pricing strategy, optimize inventory, increase cross-selling, improve product assortment, enhance store performance, improve regional sales strategy

Stakeholders: Business Head, Sales Manager, Operations Manager, Category Manager, Finance Manager

Final Deliverables: Business Requirement Document (BRD), Excel Analysis, SQL Scripts, Power BI Dashboard, Executive Presentation, Business Insights Report

Skills Covered: Excel, SQL, Power BI, Business Analysis, Retail Analytics, KPI Analysis, Dashboard Development, Business Storytelling, Executive Reporting

Expected Business Outcome: Increase sales, improve profitability, optimize inventory, enhance product performance, improve operational efficiency, and support strategic decision-making.

Project 2 – E-Commerce Funnel & Conversion Analytics

Project Objective: Analyze the end-to-end customer journey to identify funnel leakage, improve conversion rates, and optimize the online shopping experience.

Business Problem: A large percentage of customers leave the website without completing purchases. Business wants to identify where customers drop off in the funnel.

Business Goal: Increase Conversion Rate, Checkout Completion Rate, Purchase Rate, and Reduce Cart Abandonment.

Business Domains Covered: Digital Analytics, E-Commerce Analytics, Funnel Analytics, Marketing Analytics, Search Analytics

Dataset Size: 1,000 E-Commerce Records including Website Sessions, Product Views, Search, Cart, Checkout, Orders, and Marketing Channels

Data Sources: Website Sessions, Product Catalog, Search Logs, Cart Data, Checkout Data, Orders, Marketing Channels

Excel Activities: Data Cleaning, Funnel KPI Calculations, Lookup Functions, Pivot Tables, Dynamic Reports, Dashboard Creation

SQL Activities: Session Analysis, Funnel Analysis, Conversion Analysis, Customer Journey Analysis, Cohort Analysis, Window Functions, Search Analytics

Power BI Activities: Funnel Dashboard, Marketing Dashboard, Search Dashboard, Executive Dashboard, Interactive Slicers, Drill Through

Business KPIs: Website Visits, Sessions, Users, Product Views, Add-to-Cart Rate, Checkout Rate, Purchase Rate, Conversion Rate, Revenue, Orders

Advanced KPIs: Cart Abandonment Rate, Checkout Completion Rate, Buy Now Rate, Search Success Rate, Search Exit Rate, Bounce Rate, Payment Failure Rate

Business Analysis Performed: Funnel Analysis, Customer Journey Mapping, Marketing Attribution, Device Analysis, Search Analytics, Conversion Analysis, Root Cause Analysis

Visualizations Developed: Funnel Charts, KPI Cards, Traffic Source Analysis, Device Comparison, Heat Maps, Search Analytics Dashboard

Statistical Techniques: Funnel Drop-off Analysis, Conversion Analysis, Percentage Analysis, A/B Comparison

Business Frameworks Used: Customer Journey Mapping, Funnel Optimization Framework, Root Cause Analysis

Business Recommendations: Improve website search, simplify checkout process, reduce cart abandonment, optimize payment experience, improve mobile experience

Stakeholders: Product Manager, Digital Marketing Manager, UX Team, Analytics Team, Operations Team

Final Deliverables: BRD, Funnel Analysis Report, SQL Scripts, Power BI Dashboard, Executive Presentation, Recommendation Report

Skills Covered: Excel, SQL, Power BI, Funnel Analytics, Digital Analytics, Marketing Analytics, Root Cause Analysis, Executive Storytelling

Expected Business Outcome: Improve website conversion rates, reduce customer drop-offs, increase online revenue, and enhance digital customer experience.

Project 3 – Customer Value Management & Loyalty Analytics

Project Objective: Analyze customer purchase behavior, loyalty, retention, and lifetime value to improve customer engagement and maximize long-term profitability.

Business Problem: Customer repeat purchases are decreasing, churn is increasing, and marketing campaigns are generating lower returns than expected.

Business Goal: Increase Customer Lifetime Value (CLV), Retention Rate, Repeat Purchases, Campaign ROI, and Customer Engagement.

Business Domains Covered: Customer Analytics, CRM Analytics, Loyalty Analytics, Campaign Analytics, Customer Segmentation

Dataset Size: 1,000 Customer Records including Customer Master, Purchase History, Loyalty Transactions, Campaign Data, and Product Information

Data Sources: Customer Master, Loyalty Transactions, Campaign Data, Purchase History, Product Master

Excel Activities: Customer Segmentation, KPI Reports, Campaign Tracking, Pivot Tables, Dashboard Development

SQL Activities: RFM Analysis, Customer Segmentation, Cohort Analysis, Churn Analysis, CLV Analysis, Campaign Performance, Customer Migration

Power BI Activities: Customer Dashboard, Loyalty Dashboard, Campaign Dashboard, Executive Dashboard, Dynamic KPI Reporting

Business KPIs: Active Customers, New Customers, Repeat Customers, Revenue per Customer, Purchase Frequency, Average Basket Value, Customer Growth

Advanced KPIs: Customer Lifetime Value (CLV), RFM Score, Churn Rate, Retention Rate, Campaign ROI, Offer Redemption Rate, Customer Satisfaction Score

Business Analysis Performed: Customer Segmentation, Customer Migration Analysis, Churn Analysis, Retention Analysis, Loyalty Analysis, Campaign Performance Analysis

Visualizations Developed: Customer Segmentation Matrix, RFM Dashboard, Cohort Heat Maps, Retention Trend, Campaign Performance Dashboard

Statistical Techniques: Cohort Analysis, Frequency Analysis, Customer Lifetime Analysis, Retention Analysis

Business Frameworks Used: RFM Framework, Customer Lifecycle Framework, Customer Journey Framework

Business Recommendations: Launch personalized campaigns, improve loyalty rewards, reduce customer churn, increase cross-selling, implement customer retention strategies

Stakeholders: CRM Manager, Marketing Manager, Customer Experience Team, Business Head

Final Deliverables: BRD, Customer Analytics Report, SQL Scripts, Power BI Dashboard, Campaign Performance Report, Executive Presentation

Skills Covered: Excel, SQL, Power BI, Customer Analytics, CRM Analytics, Loyalty Analytics, Business Intelligence, Strategic Decision Making

Expected Business Outcome: Increase customer retention, maximize customer lifetime value, improve campaign effectiveness, strengthen loyalty programs, and drive sustainable business growth.

Project 4 – Product Performance Analytics

Project Objective: Analyze product sales performance, category contribution, profitability, and customer buying patterns to identify top-performing and underperforming products and recommend strategies to increase sales.

Business Problem: The business offers hundreds of products across multiple categories, but management is unsure which products generate the highest revenue and which products need improvement or promotional support.

Business Goal: Increase Product Sales, Revenue, Profit, Category Performance, and Customer Purchase Frequency while identifying low-performing products.

Business Domains Covered: Product Analytics, Sales Analytics, Category Analytics, Retail Analytics.

Dataset Size: 1,000 Product Sales Records.

Data Sources: Product Master, Sales Transactions, Customer Master, Category Master, Calendar Table.

Excel Activities: Data Cleaning, Remove Duplicates, IF Functions, VLOOKUP/XLOOKUP, Pivot Tables, Pivot Charts, Conditional Formatting, Product Sales Dashboard.

SQL Activities: Data Extraction, Filtering, Aggregations, GROUP BY, JOINS, CASE WHEN, Window Functions, Product Ranking, Category Analysis, Monthly Sales Trend.

Power BI Activities: Data Modeling, Power Query, DAX Measures, KPI Cards, Product Dashboard, Category Dashboard, Interactive Filters and Slicers.

Business KPIs: Revenue, Orders, Units Sold, Profit, Profit Margin, Average Selling Price (ASP), Average Order Value (AOV), Top Selling Products.

Advanced KPIs: Category Contribution %, Product Growth %, Product Ranking, Product Share %, Monthly Growth %, Best Seller Rate.

Business Analysis Performed: Product Performance Analysis, Category Analysis, Sales Trend Analysis, Revenue Analysis, Profitability Analysis, Root Cause Analysis.

Visualizations Developed: KPI Cards, Bar Charts, Line Charts, Pie Charts, Tree Maps, Product Ranking Charts, Monthly Sales Trend Dashboard.

Statistical Techniques: Trend Analysis, Growth Analysis, Variance Analysis, Percentage Analysis.

Business Frameworks Used: SPareto Analysis.

