Functional Requirements Document (FRD)

Project Title :

Nike Sales Analytics Dashboard (Power BI)

1. Dashboard Overview

The Nike Sales Analytics Dashboard is designed to provide functional, interactive, and analytical views of Nike's sales performance across time, products, regions, and sales channels. The dashboard is built in Power BI using a star schema data model and supports business decision-making through clear KPIs, trends, and drill-down analysis.

The dashboard consists of **four main functional sections (pages)**, each addressing a specific analytical requirement.

1.1 Executive Overview

Goal

Provide a high-level summary of overall business performance and key financial metrics for quick executive review.

Key Insights

- Overall revenue, profit, units sold, and profit margin
- Monthly revenue and profit trends across multiple years
- Regional contribution to total revenue
- Channel-wise revenue distribution

Functional Visuals

- **KPI Cards**
  - Total Revenue
  - Total Units Sold
  - Total Profit
  - Profit Margin %
  - Total Returns

- **Line Chart**
  - Total Revenue, Total Profit, and Profit Margin % by Month and Year
- **Bar Chart**
  - Total Revenue by Region
- **Donut Chart**
  - Total Revenue by Channel (Online vs Retail)

1.2 Time & Sales Performance

Goal

Analyze sales performance trends over time and evaluate monthly and yearly performance variations.

Key Insights

- Monthly revenue and profit trends
- Monthly units sold distribution
- Year-over-year performance comparison
- Seasonal sales patterns

Functional Visuals

- **Column & Line Chart (Combo)**
  - Total Revenue and Total Profit by Month
- **Column Chart**
  - Total Units Sold by Month
- **Table**
  - Monthly Revenue breakdown by Year with total summary

1.3 Product & Size Analysis

Goal

Evaluate product line and product-level performance to identify high-performing and underperforming products.

Key Insights

- Profit contribution by product line
- Revenue and margin distribution across products
- Gender-based sales contribution
- Product-level profitability comparison

Functional Visuals

- **Bar Chart**
  - Total Profit by Product Line
- **Bar Chart**
  - Total Units Sold by Gender
- **Bar Chart**
  - Total Revenue and Profit Margin % by Product Name

1.4 Customer, Region & Channel Insights

Goal

Analyze customer demographics, regional performance, and channel effectiveness.

Key Insights

- Regional revenue, profit, and margin comparison
- Channel-wise profit contribution
- Gender-based revenue distribution
- Identification of high-performing regions

Functional Visuals

- **Table / Matrix**
  - Region-wise Total Revenue, Total Profit, and Profit Margin %
- **Bar Chart**
  - Total Profit by Channel
- **Donut Chart**
  - Total Revenue by Gender

1.5 Returns, Discount & Profit Leakage

Goal

Identify profit leakage caused by returns, discounts, and high costs.

Key Insights

- Products with high return counts
- Revenue vs cost comparison by product line
- Impact of discounts on profit margin
- Identification of margin erosion drivers

Functional Visuals

- **Bar Chart**
  - Count of Returns by Product Name
- **Bar Chart (Grouped)**
  - Total Revenue vs Total Cost by Product Line
- **Scatter / Bubble Chart**
  - Avg Discount vs Profit Margin % vs Total Revenue by Product Name

2. Data Requirements

2.1 Fact Table - Fact_Sales

- Revenue
- Units Sold
- Total Units Sold
- Discount
- Avg Discount
- Estimated Cost
- Total Cost
- Total Profit
- Profit Margin %
- Returns
- MRP
- OrderID

2.2 Dimension Tables

- **Dim_Date**
  - Date
  - Month
  - Month Name
  - Year
- Dim_Product
  - Product Name
  - Product Line
  - Size
- Dim_Region
  - Region
- Dim_Channel
  - Channel
- Dim_Gender
  - Gender

3.Filters/Slicers

The dashboard must support the following slicers across all pages:

- Year
- Region
- Product Line
- Channel

All slicers should enable cross-filtering across visuals on the active page.

4.Interactivity Requirements

4.1Cross-Filtering

- Selecting any visual element (bar, line point, donut segment) filters all related visuals on the same page.

4.2Drill-Down

- Product Line → Product Name level analysis

5.Calculations/Measures (DAX)

Core Measures

- Total Revenue
- Total Units Sold
- Total Cost
- Total Profit
- Profit Margin %
- Avg Discount
- Total Returns

Time-Based Measures

- Revenue by Month
- Profit by Month
- Year-over-Year comparison using Date dimension

6.Export & Reporting Requirements

- Export dashboard visuals to **PDF**
- Share dashboard via **Power BI Service**
- Support filtered exports based on slicer selections

7.Performance & Design Requirements

- Optimized star schema data model for performance
- Consistent color theme and layout across all pages
- Currency formatting in INR (₹)
- Clear titles, labels, and legends for all visuals
- Responsive layout for different screen sizes

8.Assumptions & Constraints

- Data is historical and static
- Dataset is sourced from CSV files
- Power BI is the primary visualization tool
- All calculations are implemented using DAX
- Invalid or missing records are removed during data cleaning

9.Acceptance Criteria

- All KPIs calculate accurately based on slicer selections
- All visuals respond correctly to cross-filtering and drill-down
- Dashboard loads without performance lag
- Functional requirements align with business objectives