Online Retail Dashboard – Sales & Product Analytics

Introduction:

The increasing scale of e-commerce platforms generates vast volumes of data that, when analyzed effectively, can offer critical business insights. This project involves building a Power BI dashboard to analyze sales, customer behavior, and product performance using the *Online Retail II* dataset. The primary goal is to extract actionable insights and present them in a clean, interactive visual format.

Abstract:

This project focuses on visualizing and understanding sales trends, product performance, and customer distribution for an online retailer. Two key dashboard pages were developed:

1. **Executive Summary** – offering a high-level overview of revenue and customer metrics.

2. **Product Analytics** – deep diving into product-level performance and pricing patterns.
   The result is an interactive dashboard capable of aiding stakeholders in data-driven decision-making.

Tools Used:

- **Power BI Desktop** – for data modeling, visualization, and dashboard creation

- **Microsoft Excel (.xlsx)** – source format of the dataset

- **DAX (Data Analysis Expressions)** – for creating calculated columns and measures.

Steps Involved in Building the Project

1. **Data Preparation**

    o   Imported the *Online Retail II* dataset into Power BI

    o   Cleaned data by handling missing values, filtering out cancellations, and formatting date columns

    o   Created new fields such as TotalPrice (Quantity * UnitPrice) and categorized price ranges

2. **Page 1 – Executive Summary Dashboard**

    o   Created KPIs for total revenue, number of customers, and invoices

    o   Built charts showing monthly sales trends and top 5 customer countries

    o   Added slicers for InvoiceDate and Country for interactive filtering

3. **Page 2 – Product Analytics Dashboard**

    o   Developed bar charts for **Top 10 Products by Revenue** and **Quantity Sold**

    o   Created a scatter plot for **Revenue vs Quantity** with country-based color coding

    o   Built a column chart for **Product Price Distribution** using price range bins

    o   Added slicers for Product Description, Country, Customer ID, and Price

Conclusion

This Power BI project successfully demonstrates how to turn raw transactional data into meaningful insights. The interactive dashboards allow users to explore trends in revenue, product sales, and customer distribution. For an internship-level project, this meets professional standards and effectively highlights skills in data visualization, business intelligence, and dashboard development