📊 **Project Description – E-Commerce Sales Analysis (Power BI)**

This project is a **comprehensive E-Commerce Sales Analysis Dashboard** built using **Power BI**, designed to help stakeholders monitor performance, identify trends, and make data-driven business decisions.

The dashboard provides a **360° view of sales, profit, customers, and product performance** across different dimensions such as **time, category, sub-category, customer, and geography**.

🔍 **Key Features & Insights**

- **Executive KPIs**: Total Sales, Total Profit, Profit Margin %, Customer Count, Revenue, Units Sold, and Avg Sales per Customer

- **Sales & Profit Trends**: Year-wise and month-wise performance analysis

- **Category & Sub-Category Analysis**: Identifies top-performing and underperforming product categories

- **Customer Contribution Analysis**: Highlights high-value customers driving profit

- **Geographical Insights**: State-wise sales, profit, and quantity distribution using map visuals

- **Interactive Filters**: Month and State slicers for dynamic exploration

- **Clean UI/UX**: Business-friendly layout with intuitive visuals and storytelling

🎯 Business Value

- Helps management track growth trends
- Identifies profitable products and customers
- Supports inventory and marketing decisions
- Enables regional performance comparison
- Reduces manual reporting through automation

📊 Data Source

- The dataset was **originally sourced from Kaggle**, a reliable and widely used data platform for analytics and academic projects.

- For convenience and sharing purposes, the dataset was accessed via **Google Drive**.

- The dataset includes information related to:

  - Orders

  - Customers

  - Products

  - Categories & Sub-categories

  - Sales, Profit, Quantity

  - Order Date and Location (State)

📌 **Tools & Technologies Used**

- **Microsoft Power BI Desktop**

- **DAX (Data Analysis Expressions)**

- **Power Query** for data cleaning and transformation

- **Data Modeling** (relationships between tables)

- **Interactive Visualizations**

📌 **Dashboard Overview**

The dashboard consists of **two main report pages**:

Page 1 – Sales & Customer Overview

- Total Sales

- Total Profit

- Profit Margin %

- Customer Count

- Profit by Year

- Customer Count by Year

- Sales by Category

- Sales Trend by Category

- Sales by Month

- Total Profit by Customer Contribution

Page 2 – Product & Regional Analysis

- Revenue

- Total Units Sold

- Customer Count

- Average Sales per Customer

- Quantity and Category Count by Month

- Product Performance by Sub-Category

⭐ **Limitations**

- The report is not published to Power BI Service due to the absence of a paid account

- Shareable links are not generated

- Publishing using a different paid account may result in minor compatibility or refresh issues

✨ **Recommendations & Future Enhancements**

The dashboard can be enhanced by adding:

- Sales forecasting

- Customer segmentation (RFM analysis)

- Discount vs Profit analysis

- Inventory & stock-level insights

- Drill-through pages for detailed product or customer views

- Automated refresh using Power BI Service