

DATA SCIENCE & ANALYTICS TASK 1

BUSINESS SALES DASHBOARD FROM E-COMMERCE DATA

By Future Interns

Project Overview

This project focuses on analyzing e-commerce sales data to create a professional and interactive **Business Sales Dashboard** using Power BI. The goal of this task is to convert raw data into meaningful insights that can help business owners understand their sales performance and make better decisions.

The project involves working with a real-world dataset and applying basic data analytics concepts such as data cleaning, trend analysis, and visualization techniques.

Objective

The main objectives of this task are:

- To identify the **best-selling product categories**
- To analyze **monthly sales trends**
- To understand **customer behavior**
- To highlight key performance indicators such as total sales, profit, and number of orders
- To create a visually structured and interactive dashboard for business use

Dataset Description

The dataset used for this project contains e-commerce sales records including:

- Order Date
- Customer Information
- Product Categories & Sub-Categories
- Sales & Profit values
- Region and Segment details
- Order quantity and discounts

This dataset simulates a real online retail business environment, making it useful for practicing business data analysis.

Tools & Technologies Used

- **Power BI Desktop** – For data visualization and dashboard creation
- **Microsoft Excel / LibreOffice Calc** – For basic data checking and cleaning
- **CSV Dataset** – As data input format

Optional Tools (not used in this task):

- SQL
- Python

Methodology

1. Data Cleaning

- Verified column formats (dates, sales, profit)
- Removed blank or unnecessary data
- Ensured numeric fields contain valid values

2. Data Loading

- Imported dataset into Power BI
- Verified data types and relationships

3. Visualization Creation

Created the following visuals:

- **Line Chart** for monthly sales trends
- **Column Chart** for category performance
- **Column Chart** for customer segment behavior
- **KPI Cards** to display total sales, profit, and order count
- **Filters** to analyze by region and date range

4. Analysis & Insights

Data was analyzed to identify:

- Seasonal patterns
- Category performance
- Customer contribution to revenue

Dashboard Insights

Monthly Sales Trends

Sales increase significantly during year-end months, indicating strong seasonal demand.

Category Performance

Technology is the highest-selling category, followed by Furniture and Office Supplies.

Customer Behavior

The Consumer segment generates the highest revenue.

Key Metrics

- Total Sales: 2.30M
- Total Profit: 286.40K
- Total Orders: 9.994K

Skills Gained

- ✓ Data Cleaning
- ✓ Data Visualization
- ✓ Business Analysis
- ✓ Time Series Analysis
- ✓ DAX basics
- ✓ Dashboard Design
- ✓ Business Insight Generation

Conclusion

This task helped develop a practical understanding of how raw data can be converted into actionable business insights. Creating this dashboard enhanced skills related to business intelligence and data analytics and demonstrated how visualization helps organizations make data-driven decisions.

Deliverable

A fully interactive Power BI dashboard that allows users to:

- Filter data by region and time
- Analyze product performance
- Understand customer behavior
- Track business performance using KPIs