

Project Report: Zudio Sales Data Analysis

Introduction

This project analyzes sales data from Zudio, a retail clothing brand, to uncover trends in sales performance across categories, cities, and time periods. The goal was to process, visualize, and derive actionable insights using **Python for data cleaning** and **Power BI for interactive dashboards**.

Abstract

The dataset contained **7,899 entries** with **28 columns**, including store details, customer information, and sales metrics. Key steps included:

- **Data cleaning & preprocessing** (handling missing values, datetime conversion).
- **Exploratory analysis** (sales by category, city, and time trends).
- **Power BI visualizations** (quarterly sales trends, top cities, and category-wise distribution).

Tools Used

- **Python** (Pandas, NumPy, Matplotlib, Seaborn)
- **Power BI** (Interactive dashboards with line and pie charts)
- **Jupyter Notebook** (Data processing)

Steps Involved

1. Data Loading & Cleaning

- Loaded the dataset using `pd.read_csv()`.
- Converted Order Date and Store Open Date to datetime format.
- Checked for missing values (Security Features had 2,038 nulls).

2. Exploratory Analysis (Python)

- **Sales by Category:** Kids (₹84.4L), Men (₹82.1L), Women (₹83.9L).
- **Top Cities by Sales:** Jalna, Mysuru, Kolkata, Jammu, Bhopal.
- **Correlation:** Strong positive (0.74) between **Quantity Sold** and **Sales Profit**.

3. Power BI Visualizations

- **Line Chart:** Quarterly sales trends (2024) showing peak seasons.
- **Pie Charts:**
 - **Top 5 Cities by Sales** (Jalna, Mysuru, Kolkata, Jammu, Bhopal).
 - **Category-wise Sales Distribution** (Kids 34%, Men 33%, Women 33%).

4. Data Export

- Cleaned dataset saved as `data.csv` for Power BI integration.

Conclusion

- **Quarterly Trends:** Sales peaked in **Q2 (April-June)**.
- **Top Cities:** Jalna and Mysuru contributed significantly.
- **Category Balance:** Nearly equal sales across Kids, Men, and Women.

Recommendations:

- Increase stock in high-performing cities.
- Run targeted promotions in low-season quarters.