📝 Project Report: End-to-End Retail Performance and Behavioral Analytics

Project Title: End-to-End Retail Performance and Behavioral Analytics
Company: RetailNova Inc.
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Tools Used: Python, SQL, Power BI

📌 Objective

Analyze retail sales, customer behavior, product performance, and returns to help RetailNova improve profitability and make data-driven decisions.

📁 Datasets Used

- sales_data.csv – Sales transactions

- customers.csv – Customer details

- products.csv – Product info

- stores.csv – Store operations

- returns.csv – Product returns

🔧 Steps Followed

1. **Data Cleaning & EDA (Python)**

   o Removed nulls/duplicates

   o Fixed data types and created columns like profit and age group

   o Performed basic trend and distribution analysis

2. **SQL Analysis**

   o Loaded data into SQL database

   o Wrote queries to answer 10 business questions

   o Exported results for dashboard use

3. **Dashboard Creation (Power BI)**

   o Built 5 dashboards: Sales, Customers, Products, Stores, Returns

   o Included filters, KPIs, and interactive visuals

📊 Key Insights

- Electronics and Apparel are top-selling categories

- Online sales have higher average profit

- Return rate is high in personal care category

- Top 5 customers generate significant profit

- Some stores have high costs but low profit

✅ Deliverables

- Cleaned datasets
- Python EDA notebook
- SQL scripts & ER diagram
- Power BI dashboards
- Final report & business insights