Problem statement

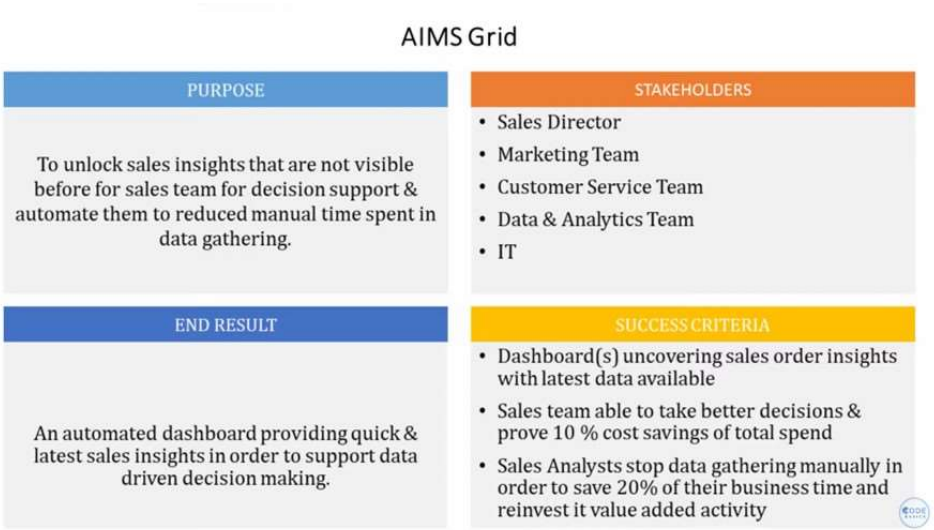
There is an ecommerce website which used to deliver the good according to the demand. The board members the company is facing a lot of issues in terms of understanding how the business is performing and what are all the problem company is facing currently as the sales are not as expected and declining gradually products, and sales trends. Also wanted to get analyse retail sales data to derive insights into customer behaviour, popular products, and sales trends.

Solution

Board Members decided to analyse the using the python through its various library, also using the Pytorch for easy codes and implementation and also for visualization take the help of the BI Tools like Power BI

AIMS Grid

By using the AIMS grid project management tool, we made sure what are the purpose, stakeholder, end result and success criteria of our project.



Steps Followed in this project

1. **Learned about AIMS grid for project planning.**
2. **Used Python and Pytorch for analysing the data and creating the new columns, finding duplicates and removing errors.**
3. **Data Cleaning in power query.**
4. **Performed ETL process (Extract Transform and Load)**
5. **Created measure for needs and used them for creating visuals in PowerBI and using Matplatlib.**
6. **In the currency there were two types of currencies in transactions, performed currency conversion to make all the currency type same**
7. **Data Validation**
8. **Data Modelling and Visualization.**

Insights

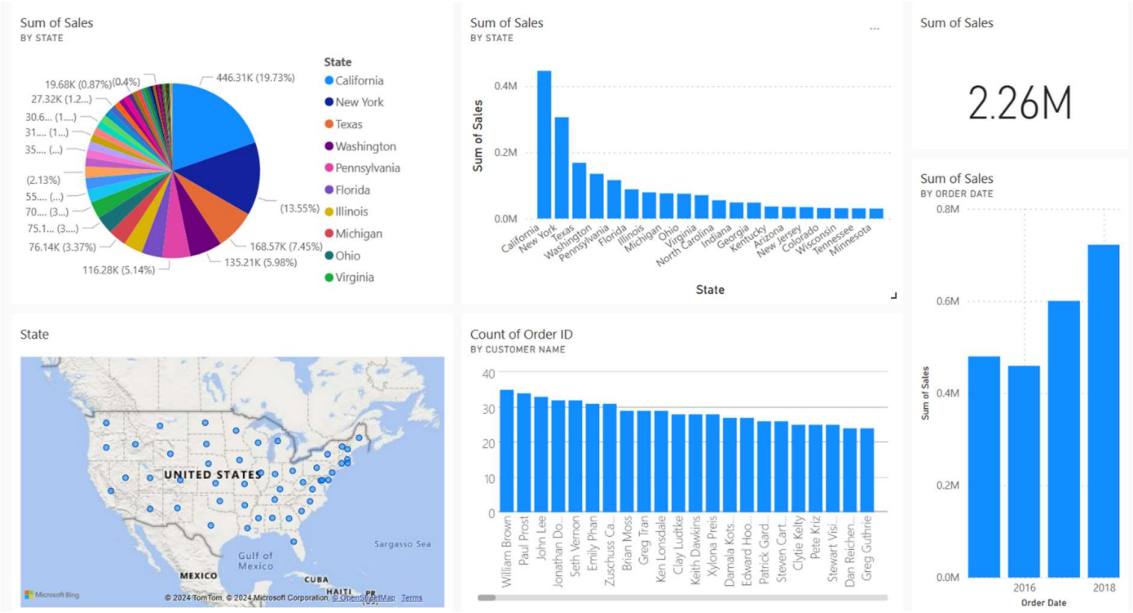
1. **In this dashboard, we can see company has generated total revenue in 4 years 2.26M, Sales Qty 9789. in 2018 company has generated sold the item worth 722k with an average sale of 565.2k from 2015 to 2018.**
2. **In 4 years, Canon image CLASS 2200 Advanced Copier is top selling product in terms of revenue with 61599.**
3. **In 4 years, Technology category producing the maximum selling products and the office Supplies was the last.**
4. **In the 4 years the most frequent customer was the William Brown with an order of about 35 times.**
5. **The City with Highest number of the orders was the New York City and the with lowest number of the order was the Aberdeen.**
6. **In our top 5 customers, the Sean Miller is our biggest customer who has purchased 25043.050 revenue generated in 4 years.**
7. **Diving the sales of the 4 years into the quarter we came to know that the most profitable quarter was the 2018 Q4, sale has been increased through the years.**

8. **On the analysis the Q4 of every year were the most profitable quarter among the year.**
9. **Figures of the sales is being improving year by year as 2015 the total sum of the sales was 459k and the 2018 was 722k.**

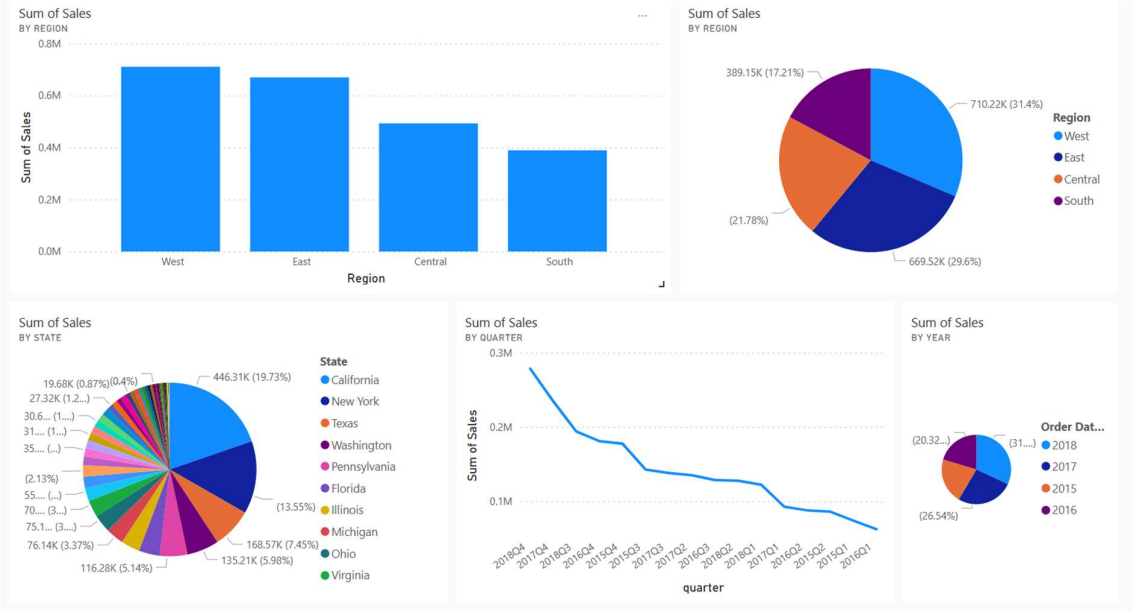
Key Learnings

1. **Learned about what real business data sets look like.**
2. **Learned about how to write some major analysis queries in Python.**
3. **how to connect the database's tables to Power Bi and how to clean & modify the unwanted data in Power Query and using the python.**
4. **Learned about some major practical DAX functions and measures.**
5. **Learned about the major practical programming the libraries of the python and the pytorch.**
6. **Learned about some major analytical visuals and reports.**

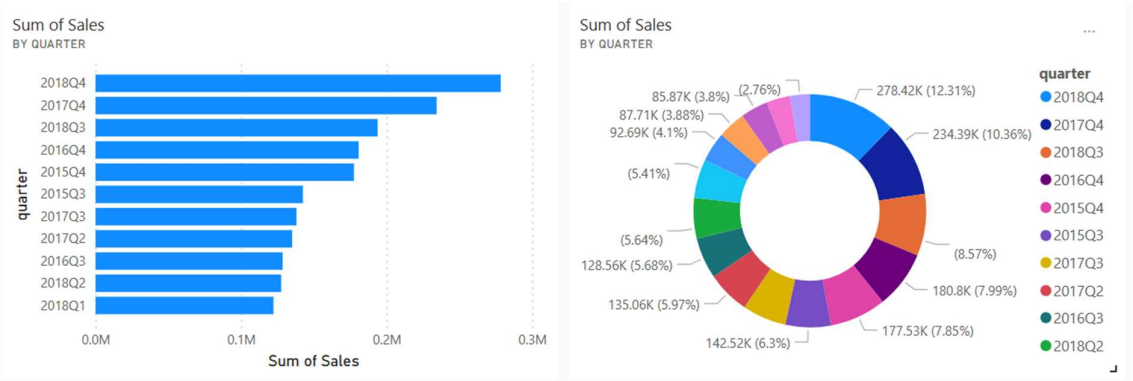
Dashboard Region analysis



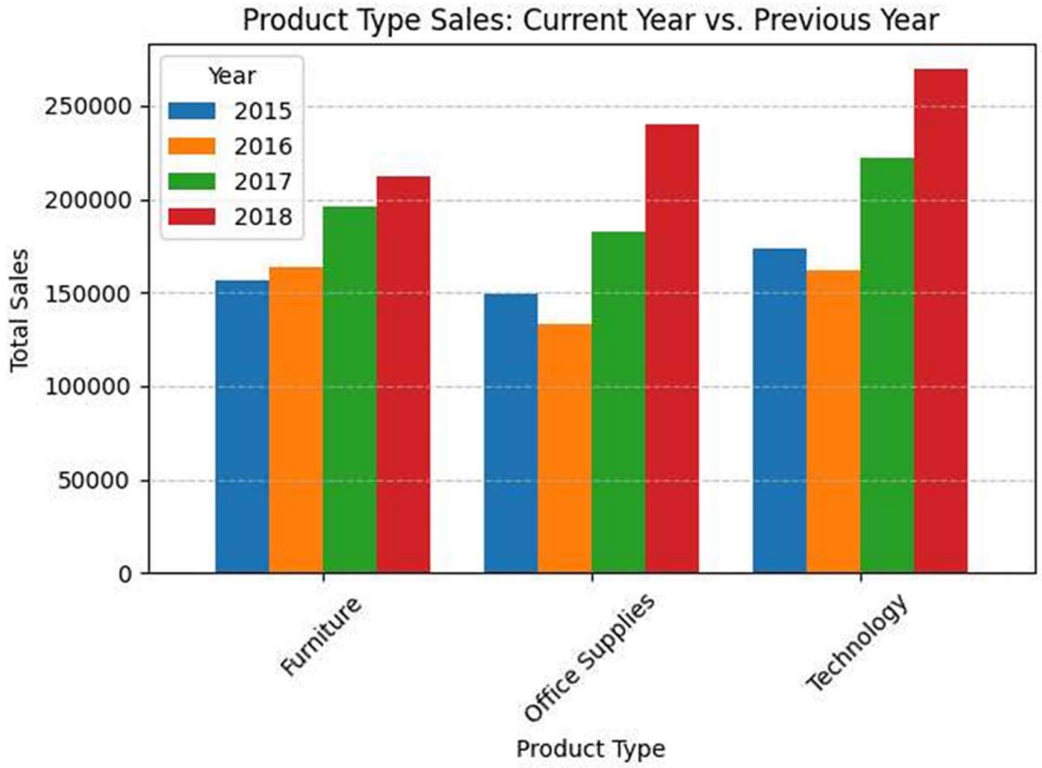
Dashboard of the sale Years wise



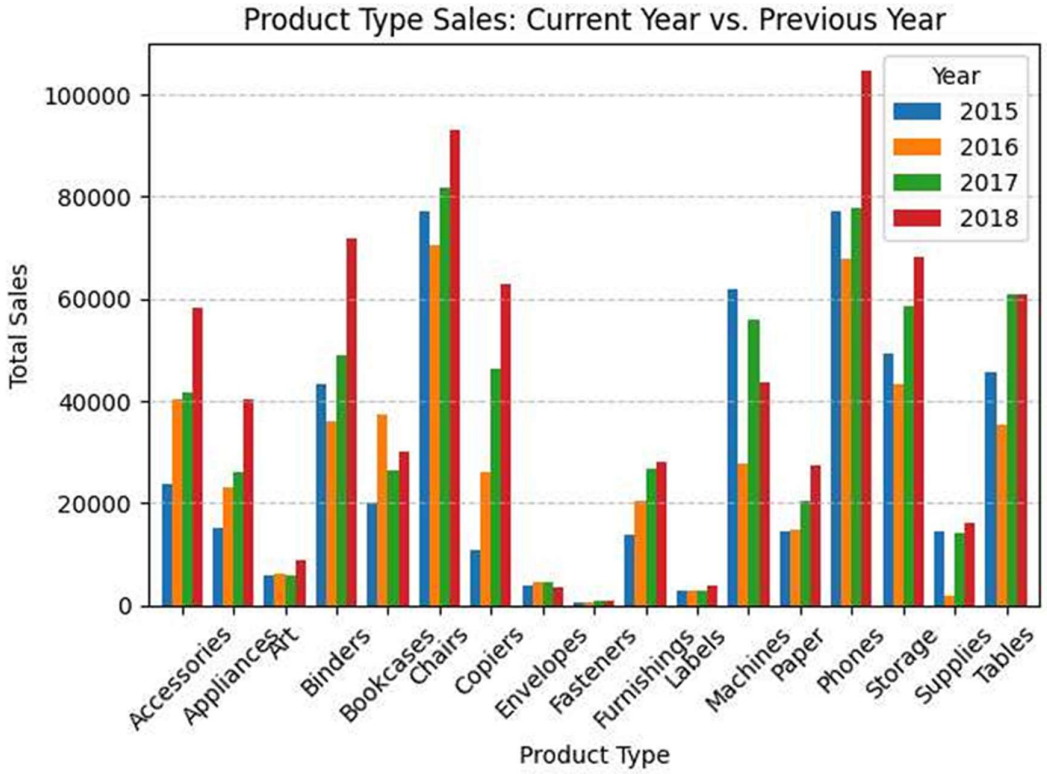
Dashboard quarter wise



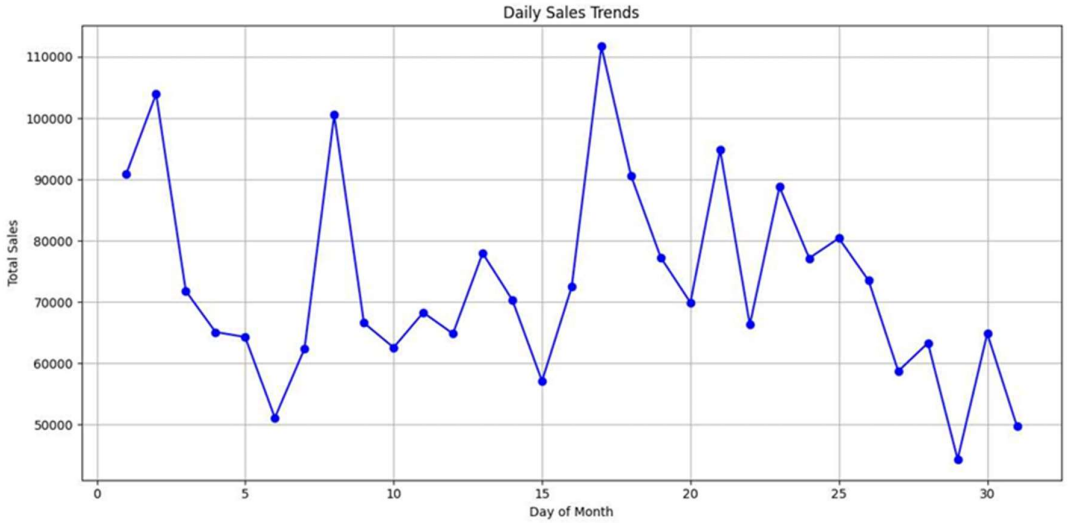
Current Year vs. Previous Year CATEGORY WISE

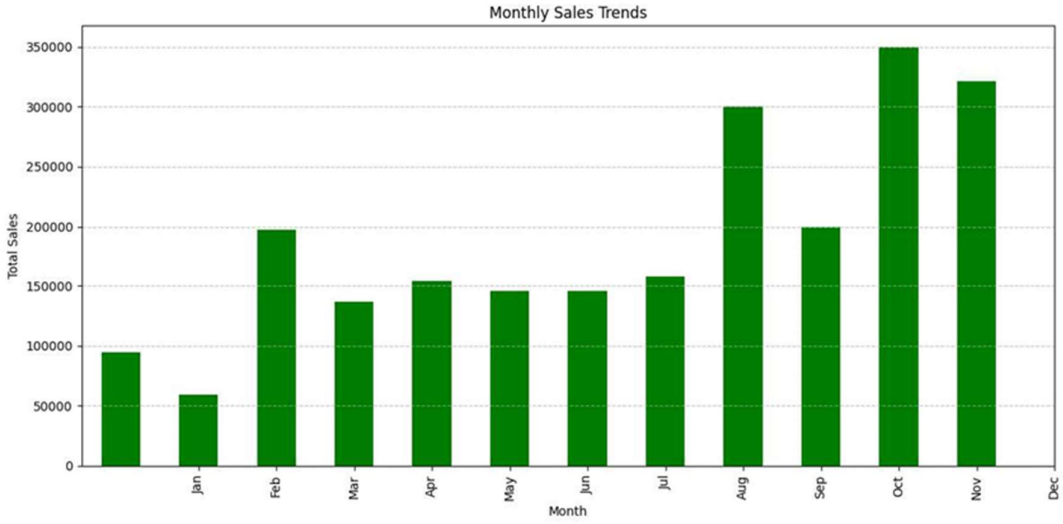


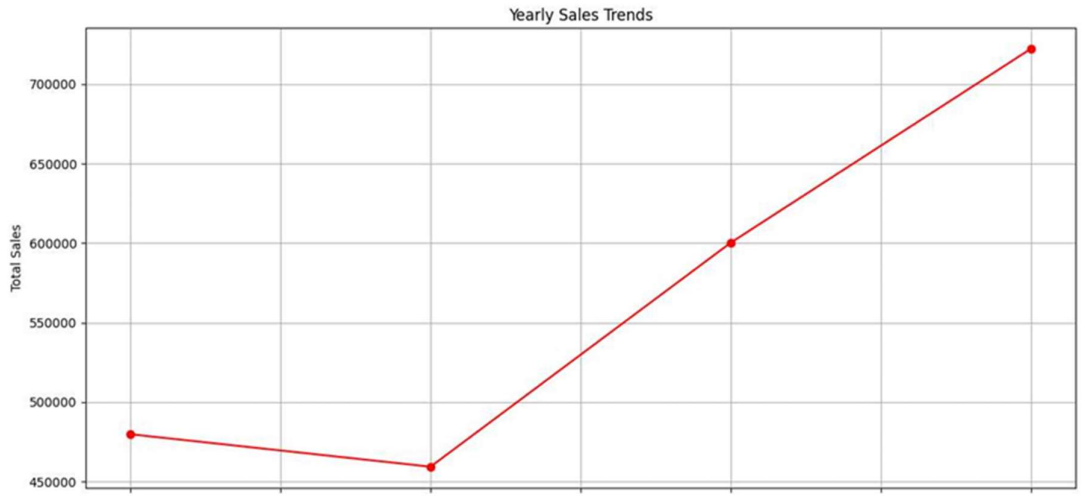
Current Year vs. Previous Year SUB-CATEGORY WISE



Sales Trend Daily, Monthly, and Yearly







Time Series Dataset Visuals