E-Commerce Fashion Store Data Analysis Report

Project Goal:

- Our project goal was to identify the useful insights from the data and generate a report for our stakeholder, it will help the company to make a the right decision.
- Answer the stakeholder question
- Build a dashboard is to view the most important KPIs.

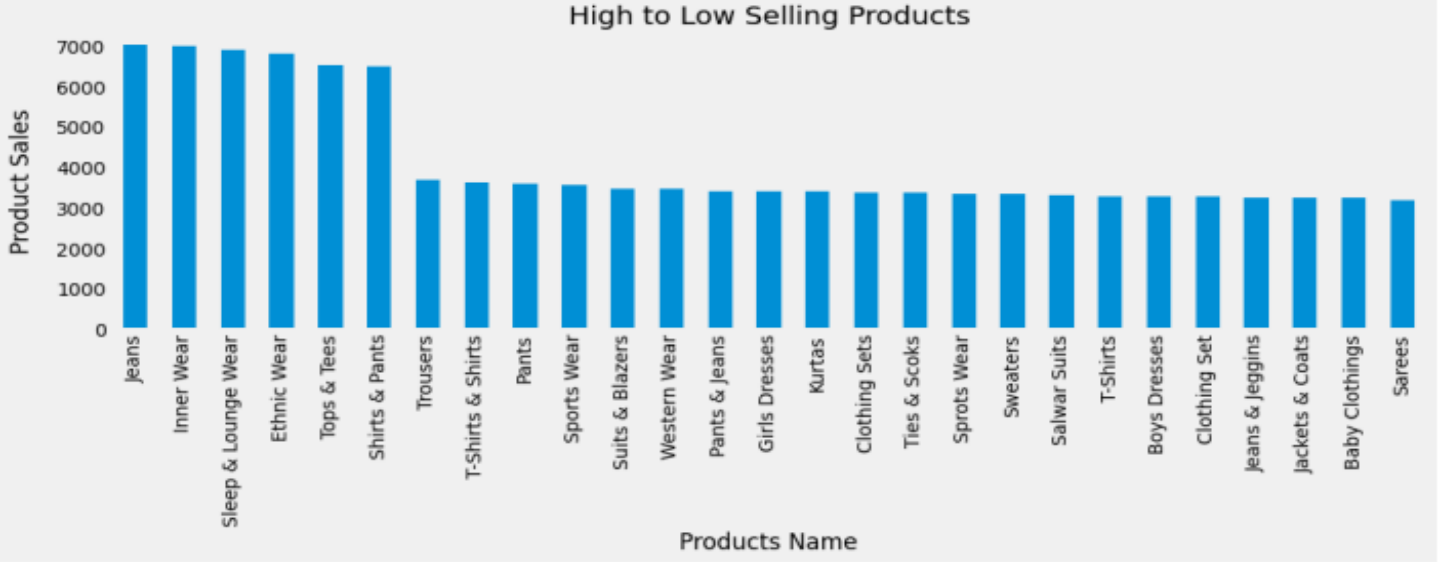
Case Study:

- Product Analysis
- Customer Analysis
- Sales Analysis
- Revenue Analysis

Product Analyst

All the source codes are available in GitHub page

- **Top Selling Products**
  - Top Selling Products to Lowest Selling Products



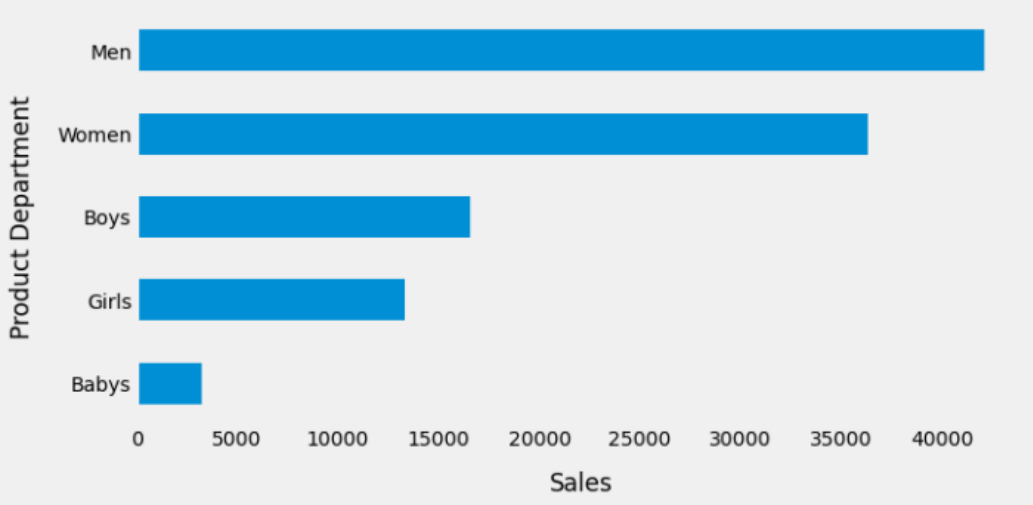
-- Find which Department Products Female Customer Most Buying

```
SELECT  p.ProductDepartment, COUNT(pd.ProductID) AS Total_Count FROM
Products p
INNER JOIN  Purchase_Details pd ON p.ProductID = pd.ProductID
INNER JOIN Customers c ON pd.CustomerID = c.CustomerID
WHERE Gender = 'Female'
GROUP BY ProductDepartment
ORDER BY Total_Count DESC;
```

Men	**7342**
Women	**6334**
Boys	**2863**
Girls	**2329**
Babys	**548**

- **Product Department**
  - Selling By Product Department

```
Department_sales = df_dept.groupby(["Product Category"])
["Quantity"].sum().sort_values(ascending=True)

Department_sales.plot(kind="barh",grid=False,figsize=(10,5))
plt.xlabel("Sales",labelpad=15)
plt.ylabel("Product Department",labelpad=15)
plt.show()
```

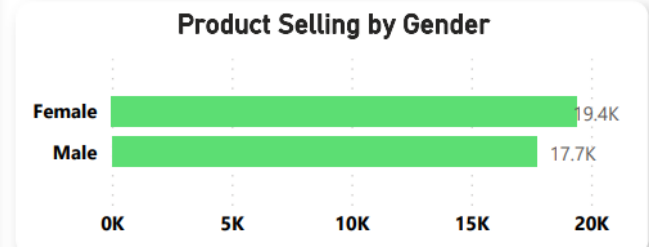


  - **Products Department sales by year**

```
SELECT  p.ProductDepartment,
    COUNT( CASE WHEN od.Year = 2019 THEN 1 ELSE NULL END) AS 'Year 2019',
    COUNT( CASE WHEN od.Year = 2020 THEN 1 ELSE NULL END) AS 'Year 2020',
    COUNT( CASE WHEN od.Year = 2021 THEN 1 ELSE NULL END) AS 'Year 2021'
FROM Orders od
INNER JOIN Purchase_Details pd ON od.BillID = pd.BillID
INNER JOIN Products p ON pd.ProductID = p.ProductID
GROUP BY ProductDepartment;
```

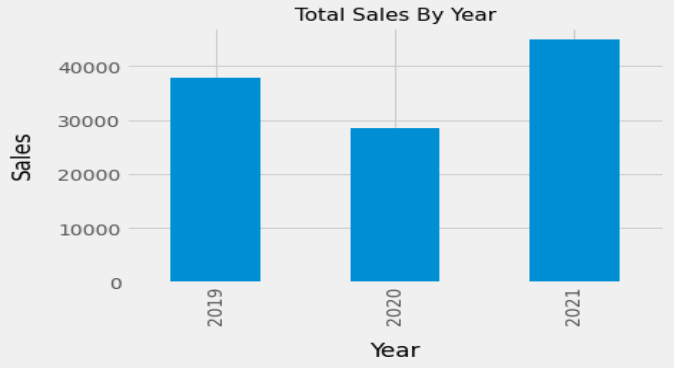
Products Department	Year 2019	Year 2020	Year 2021
Men	4863	3564	5564
Girls	1469	1171	1817
Women	4142	3040	4935
Babys	358	294	435
Boys	1791	1463	2250

  - **Product Sales By Gender**

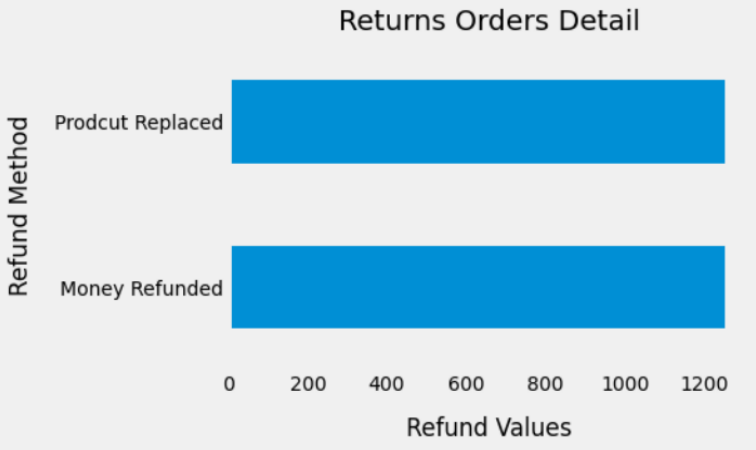


Sales Analysis

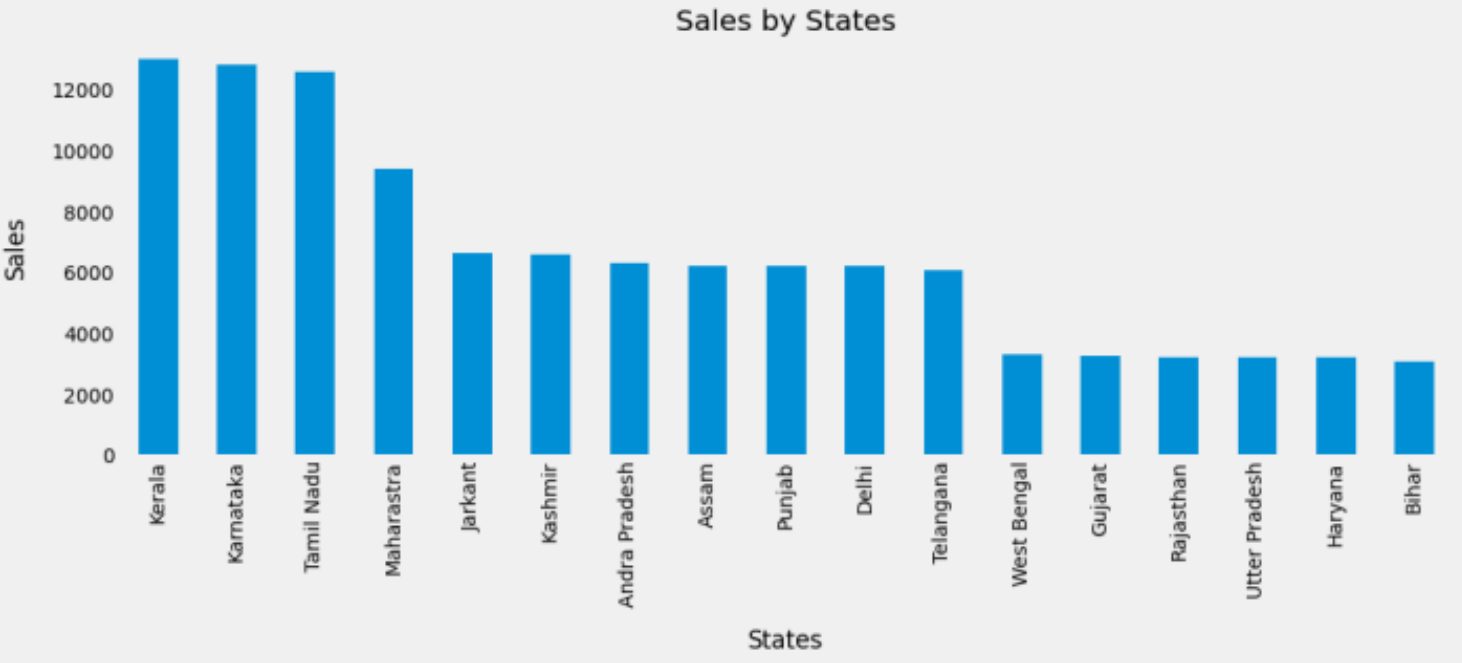
- Total Sales by Year
    - Compare the total sales by year



- Total Returns and Replaced Sales
    - Compare between return sales and replaced sales



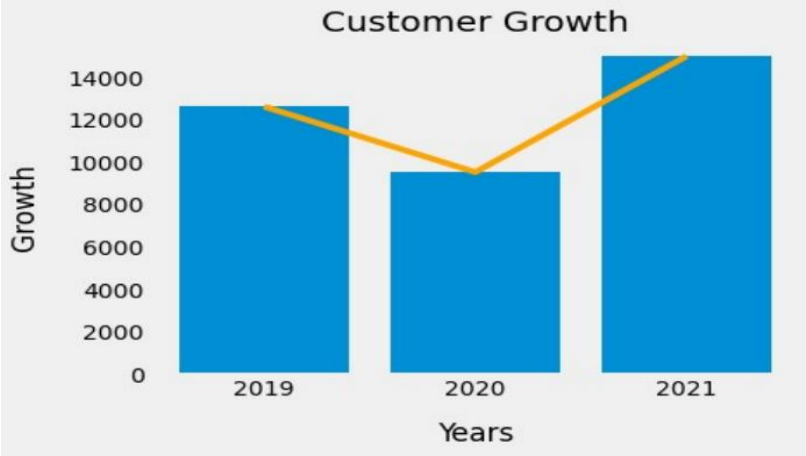
- Sales By States
    - Total Sales by states



Customer Analysis

- Customer Growth By Year

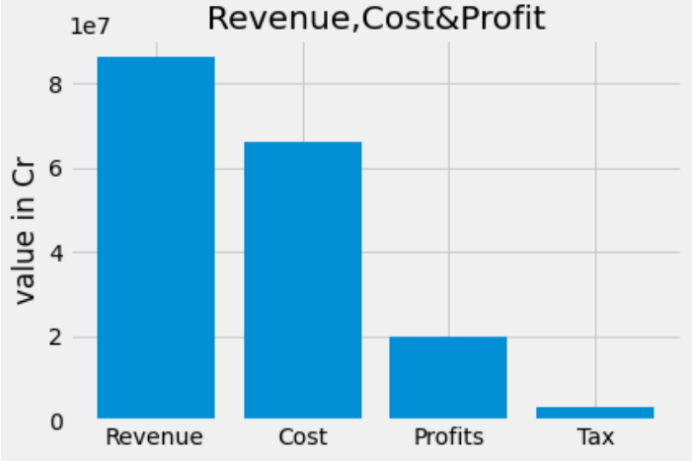
```
df_fpp = females.merge(purchases,on="Customer
ID").merge(products,on="Product ID")

female_products = df_fpp.value_counts("Product Name")

female_products.plot(kind="bar",figsize=(15,3),grid=False)
plt.title("Products Sales by Female Customers")
plt.xlabel("Product Name")
plt.ylabel("Sales Count",labelpad=15)
plt.show()
```



- **Female Customers Most Buying Products**

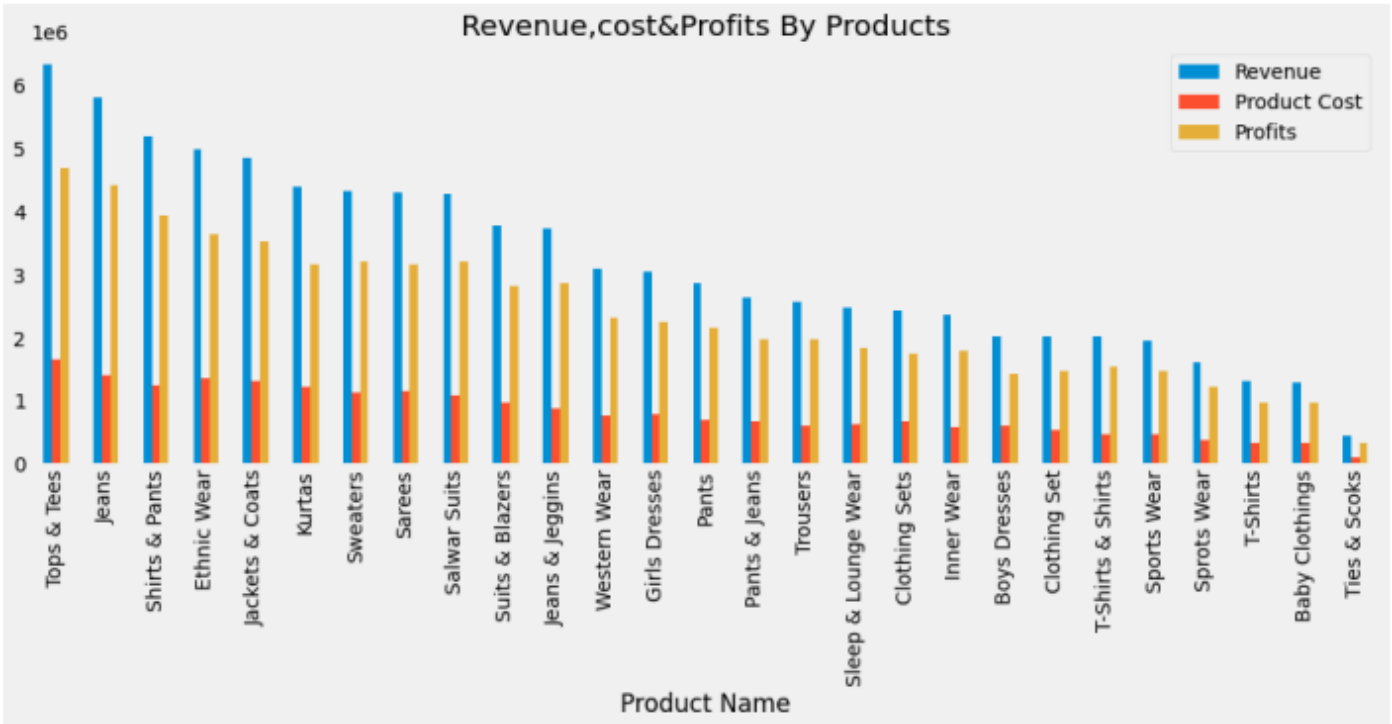
Revenue Analysis

- Revenue, Cost and Profits



- Most Profitable Products

```
rcp_product = (rev_yr.groupby(["Product Name"])
               [["Revenue","Product
Cost","Profits"]].sum().sort_values("Revenue",ascending=False))

rcp_product.plot(kind="bar",figsize=(15,5),grid=False)
plt.title("Revenue,cost&Profits By Products")
plt.show()
```



All Source Codes Are Available In **GitHub Page**

Mail ID& LinkedIn – **naveenme003@gmail.com** & **LinkedIn**