Supermarket Sales Analysis Using Python

Business Insights

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After wrangling the data and delivering it to the refined format, we start executing business insights.

The Insights almost cover the possible correlations and trends within data in the 3 different branches.

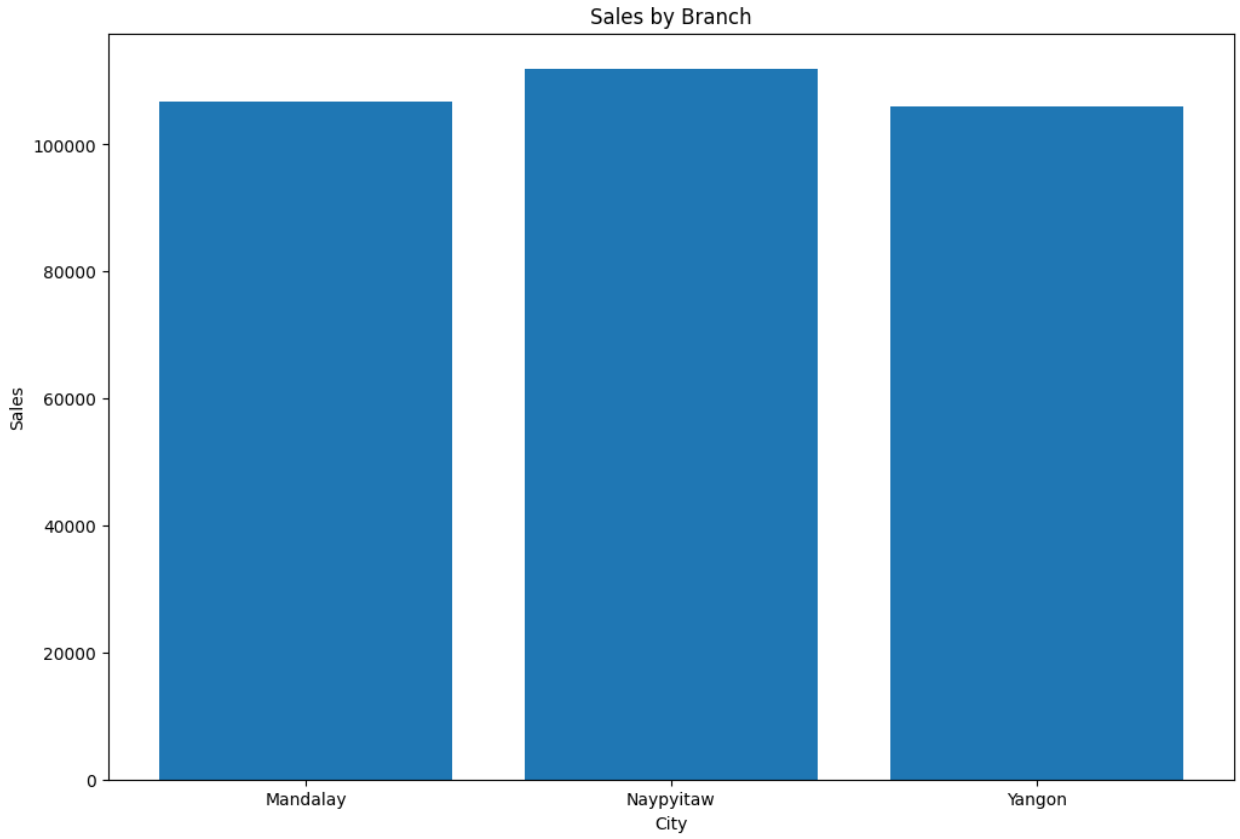
The data has 1000 records with:

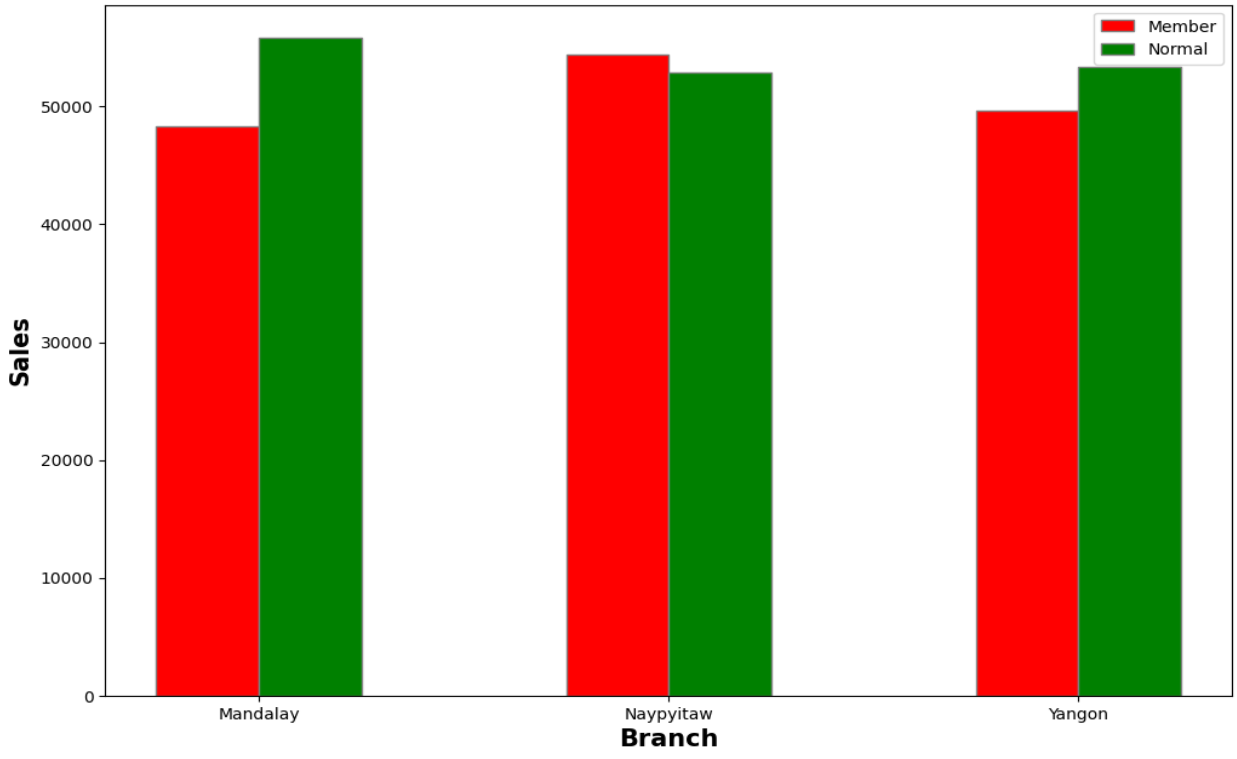
Invoice ID – Branch – Customer type – Gender – Product line – Unit price – Quantity - Tax 5% - Total – Date – Time – Payment – Rating

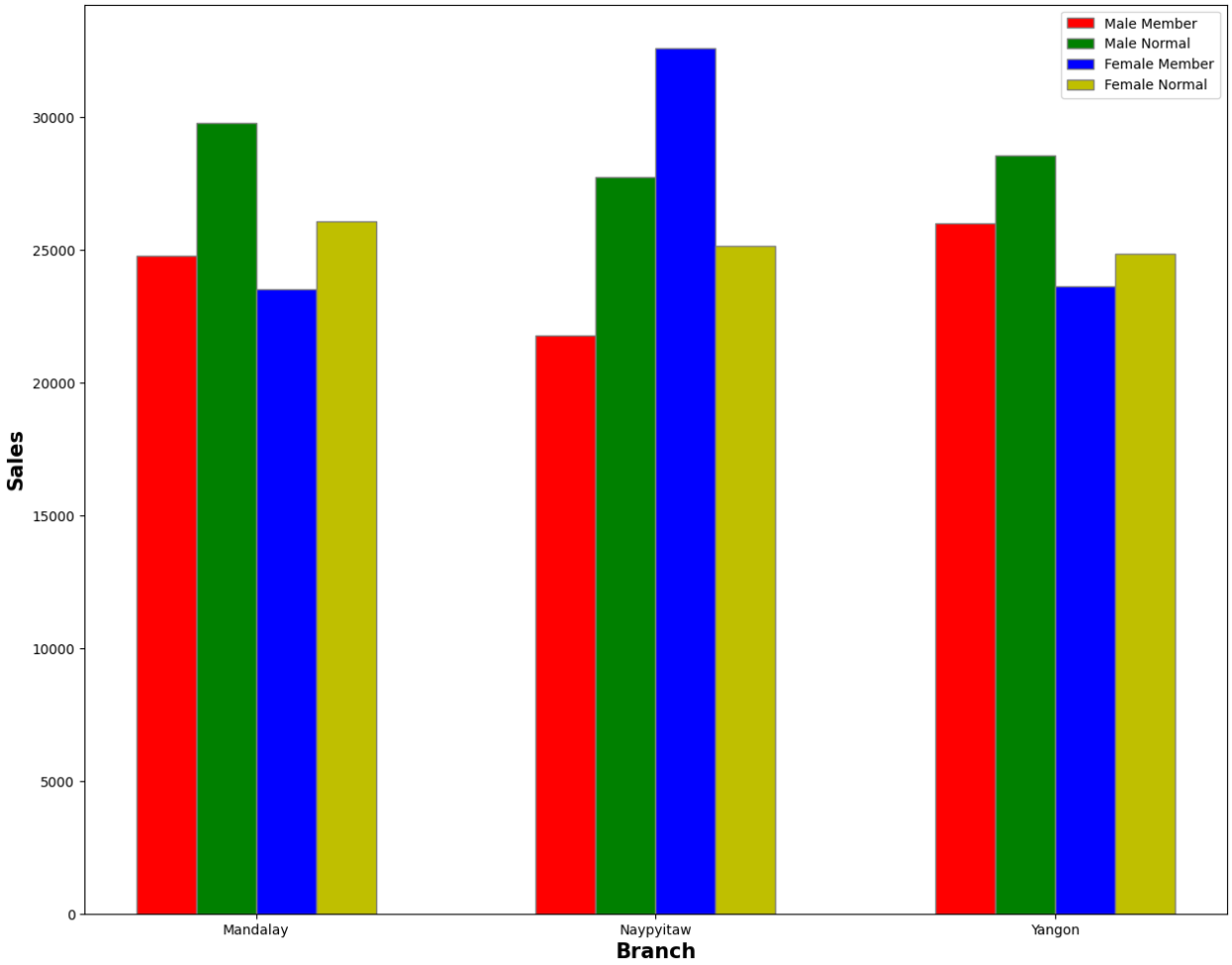
The insights focus on:

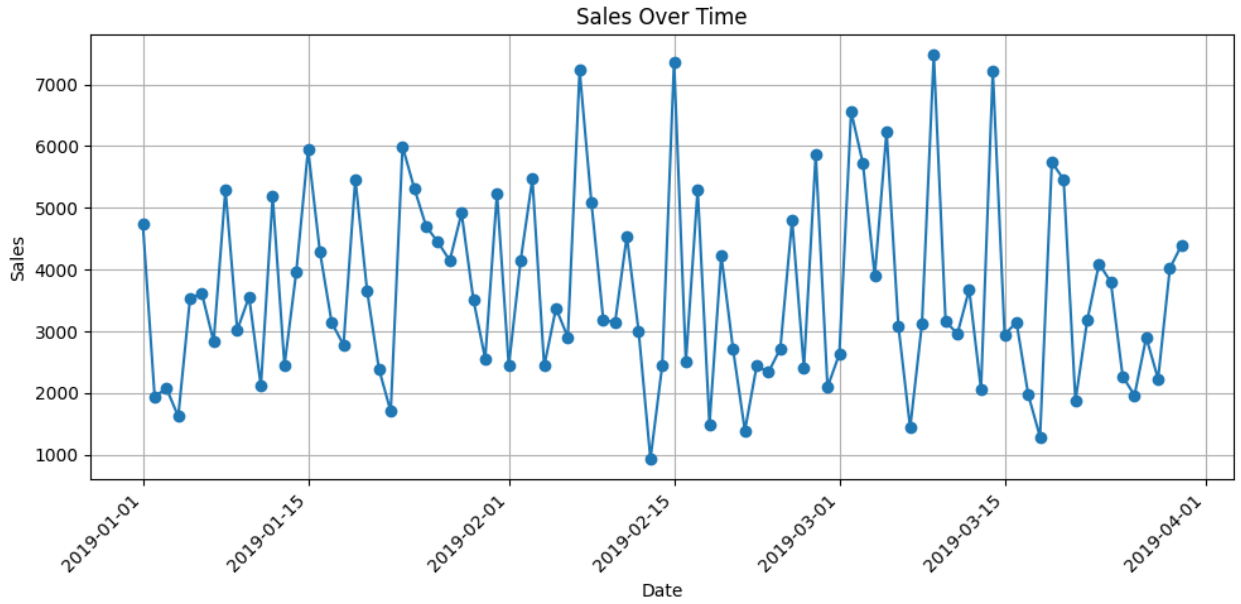
- Sales of branches, with showing details of customers whether there are: members or normals – male or female, and date series of sales.
- Sales of the 6 product lines in total, then in every branch separately. Also, there is filtering every product line based on gender.

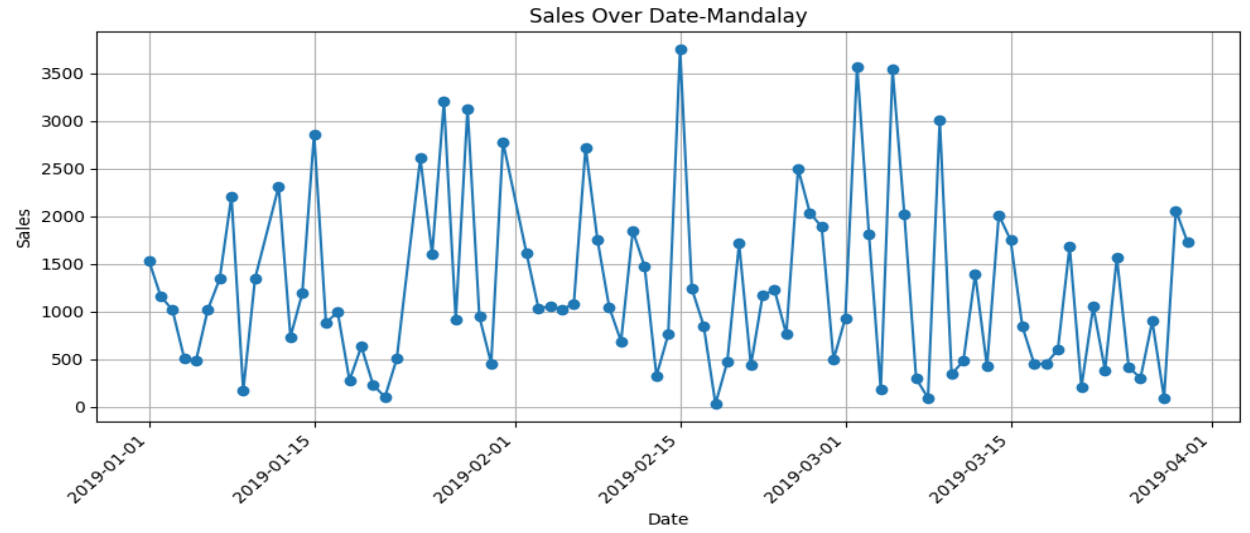
1- Branches: with 3 Branches (Mandalay, Naypyitaw, Yangon)

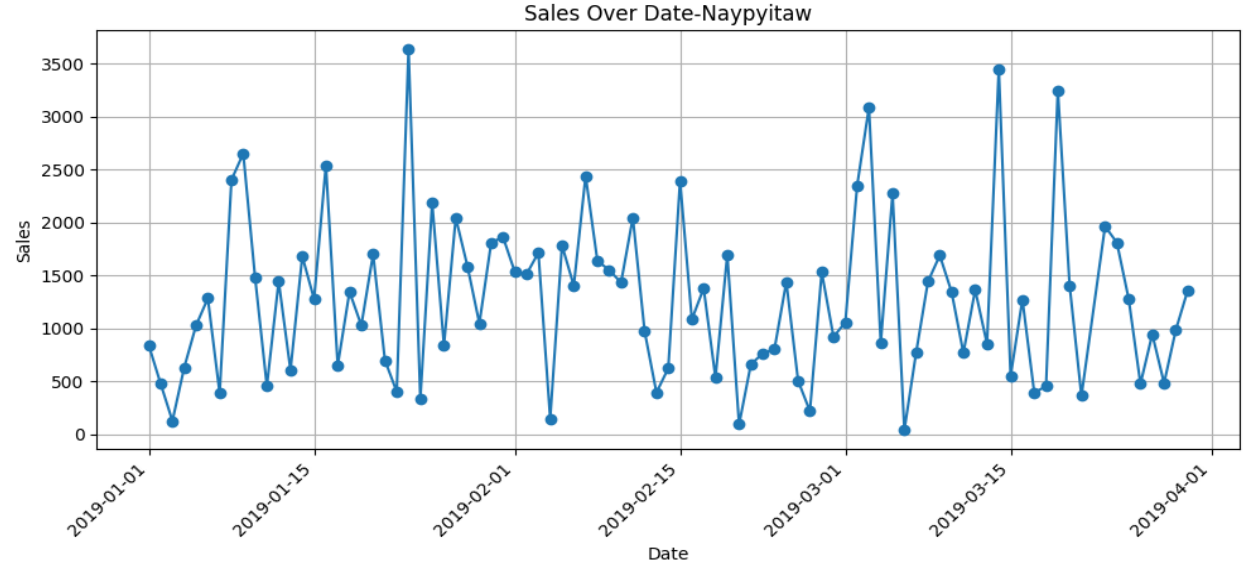


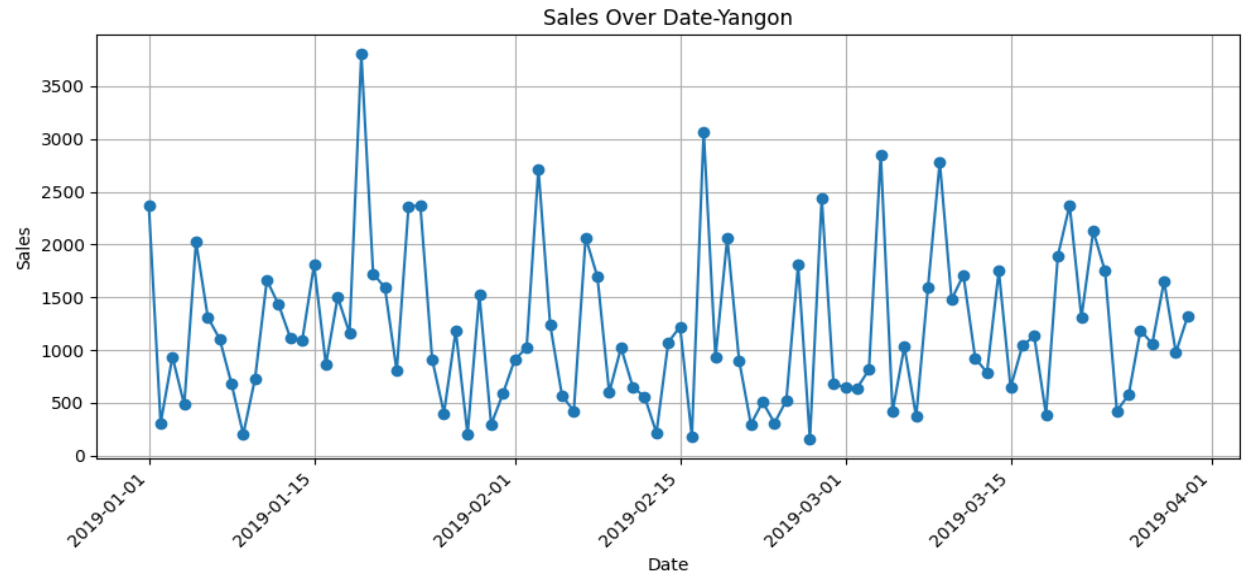



Male Member
Male Normal
Female Member
Female Normal
Sales
30000
25000
20000
15000
10000
5000
0
Mandalay
Naypyitaw
Yangon
Branch

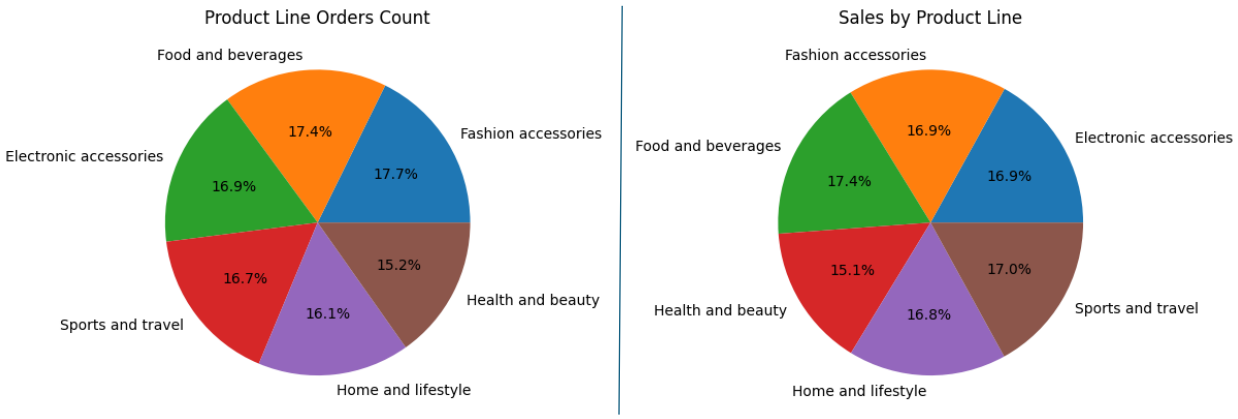

Sales Over Time
Sales
7000
6000
5000
4000
3000
2000
1000
2019-01-01
2019-01-15
2019-02-01
2019-02-15
2019-03-01
2019-03-15
2019-04-01
Date

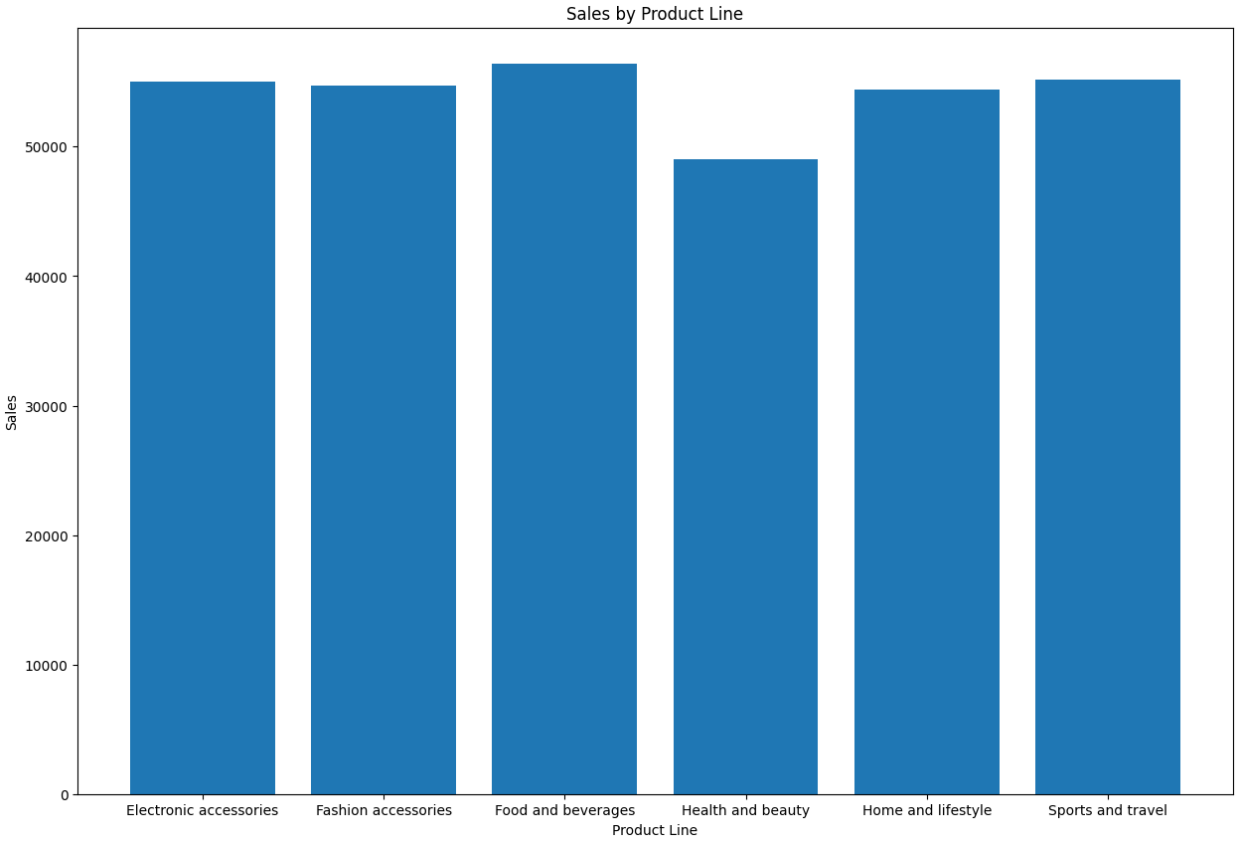

Sales Over Date-Mandalay
Sales
Date
0
500
1000
1500
2000
2500
3000
3500
2019-01-01
2019-01-15
2019-02-01
2019-02-15
2019-03-01
2019-03-15
2019-04-01

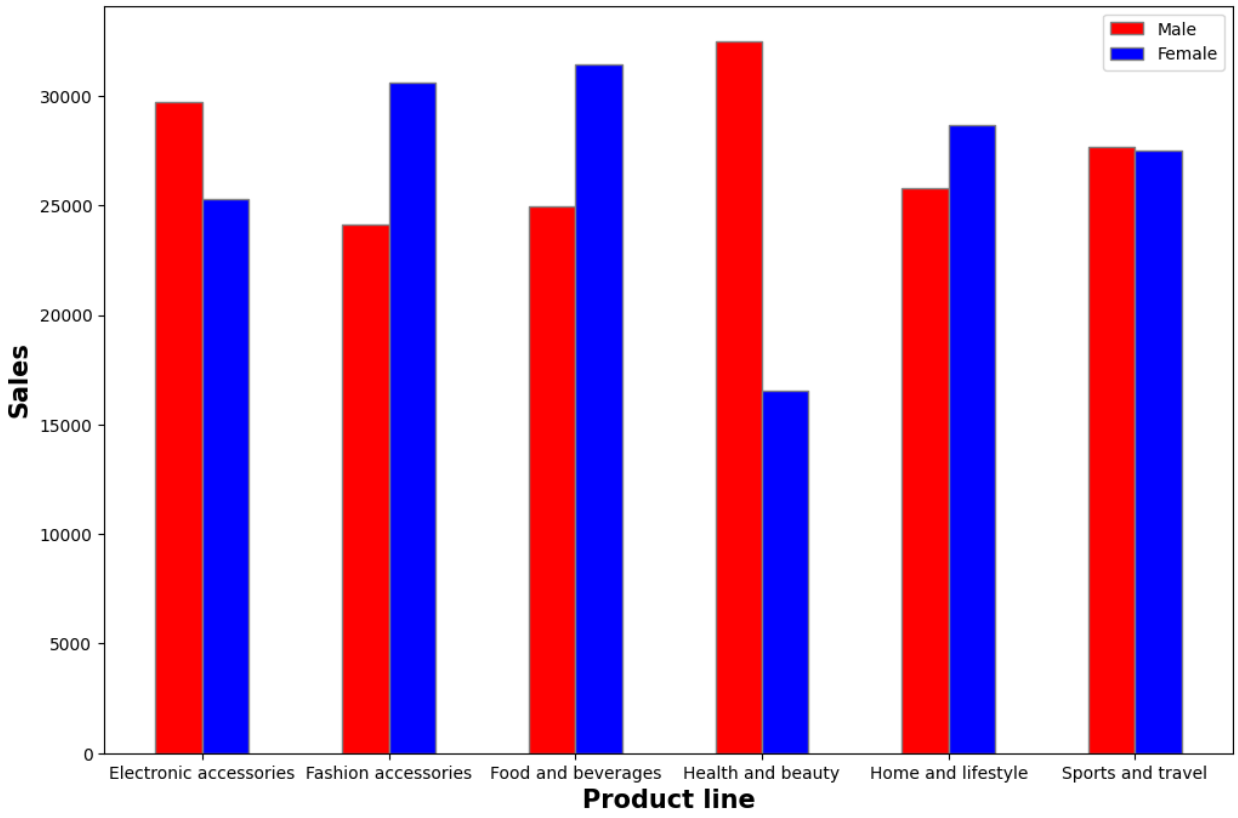

Sales Over Date-Naypyitaw
Sales
Date
0
500
1000
1500
2000
2500
3000
3500
2019-01-01
2019-01-15
2019-02-01
2019-02-15
2019-03-01
2019-03-15
2019-04-01

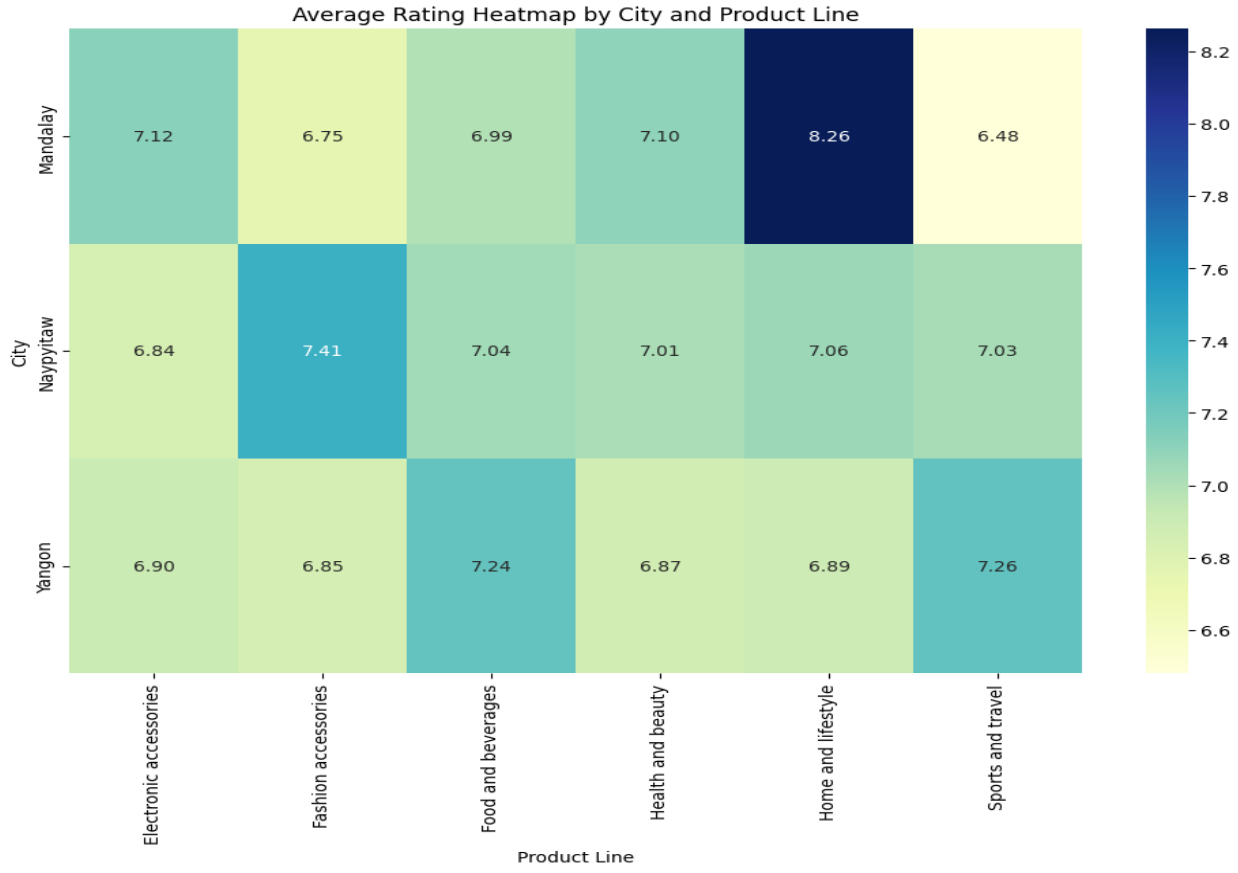

Sales Over Date-Yangon
Sales
Date
0
500
1000
1500
2000
2500
3000
3500
2019-01-01
2019-01-15
2019-02-01
2019-02-15
2019-03-01
2019-03-15
2019-04-01

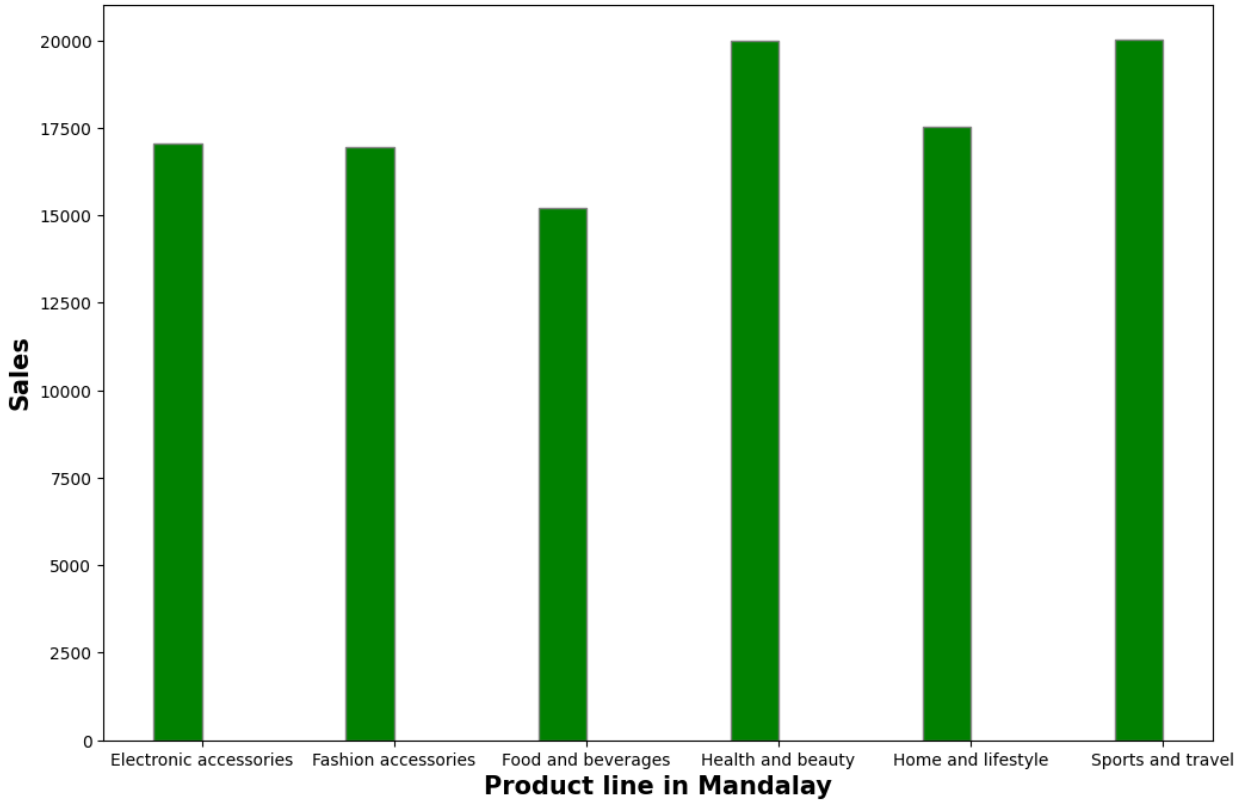
2- Product Lines: with 6 product Lines (Electronic accessories, Fashion accessories, Food and beverages, Health and beauty, Home and lifestyle, Sports and travel)

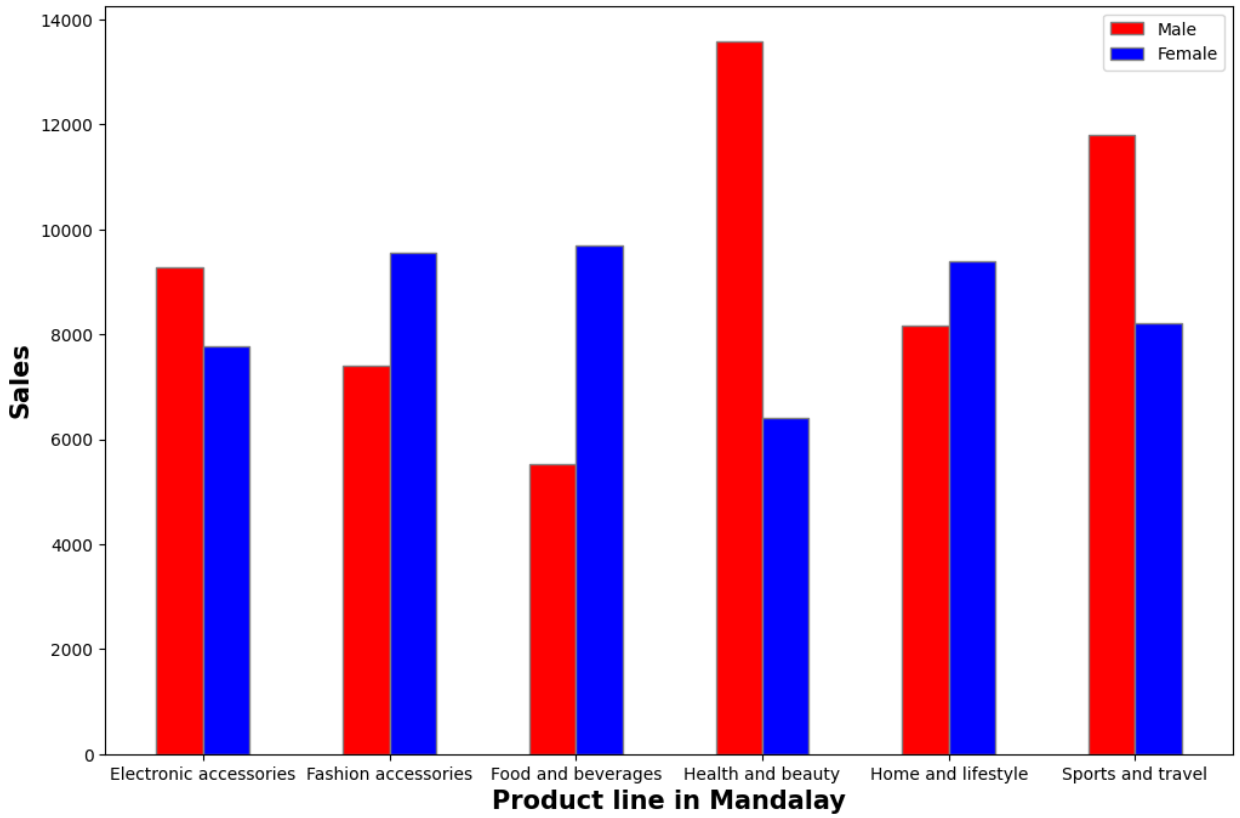


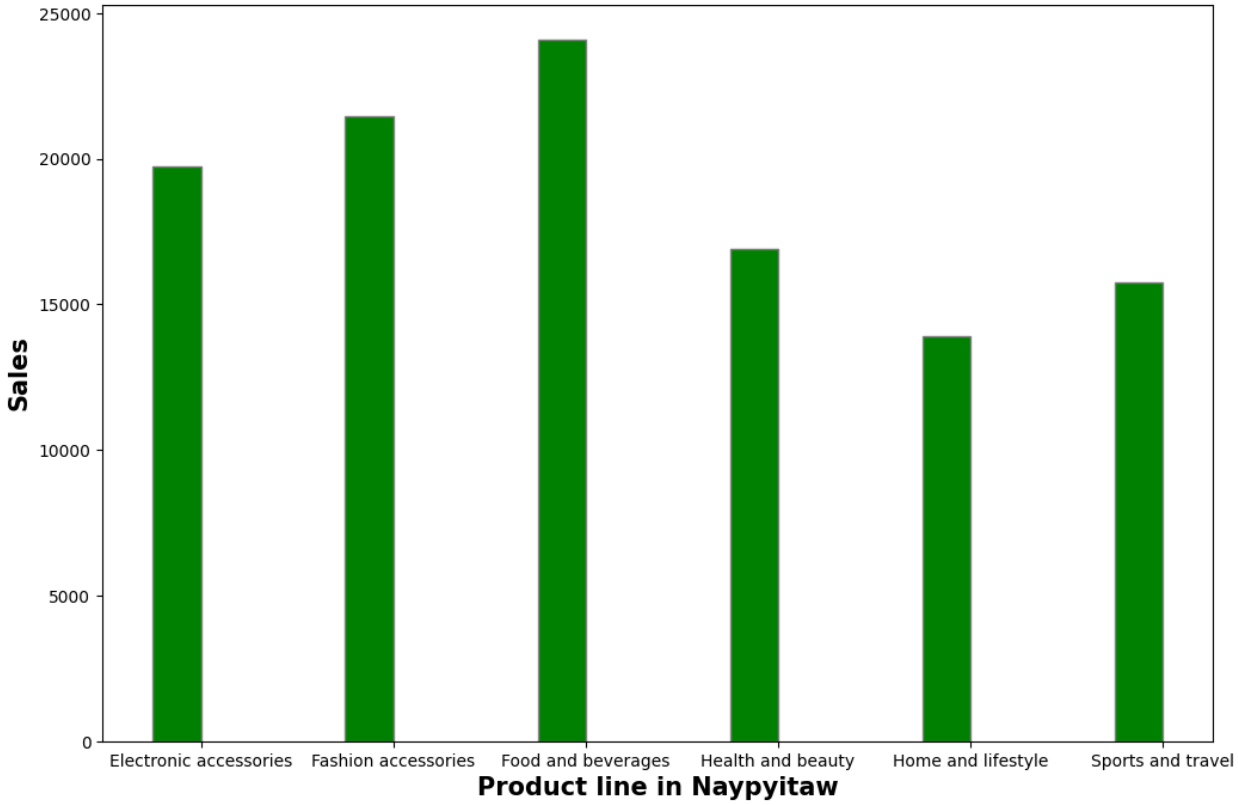


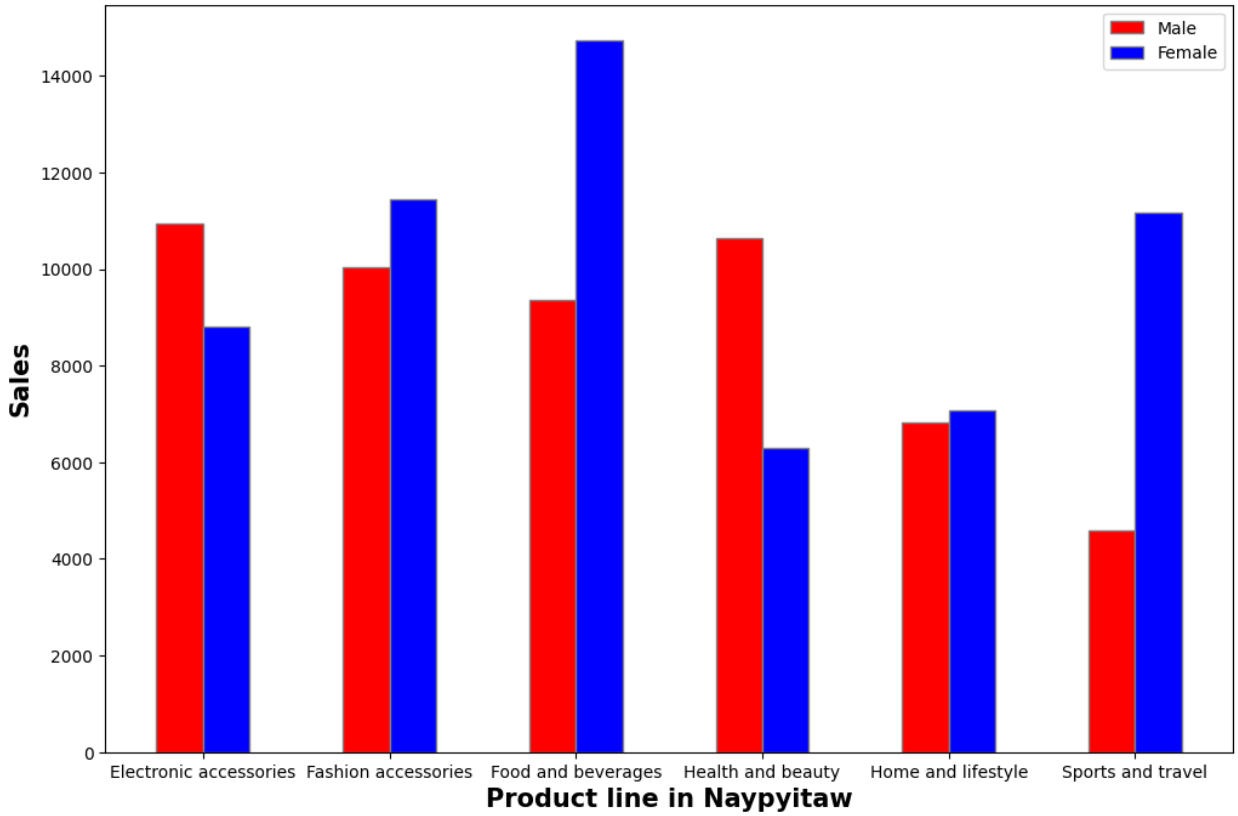

Male
Female
Sales
30000
25000
20000
15000
10000
5000
0
Electronic accessories
Fashion accessories
Food and beverages
Health and beauty
Home and lifestyle
Sports and travel
Product line

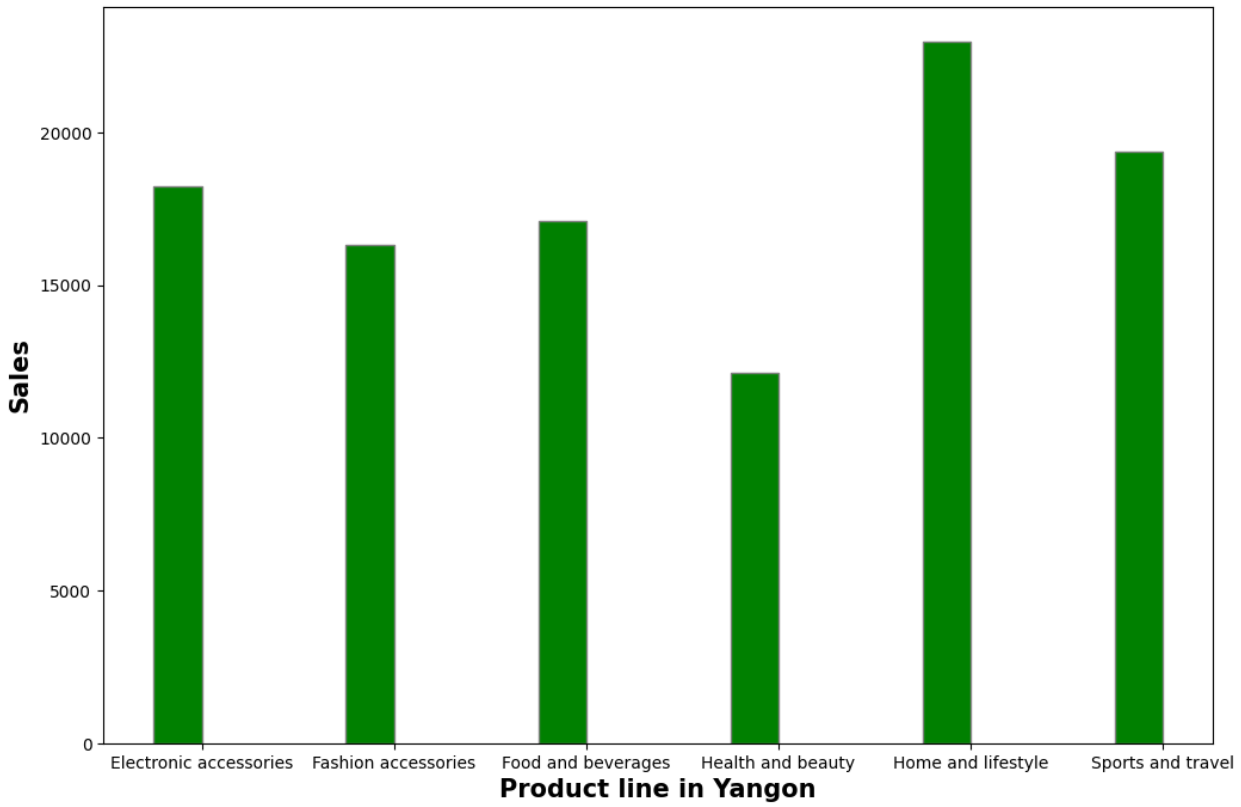

Average Rating Heatmap by City and Product Line
City
Mandalay
Naypyitaw
Yangon
7.12
6.75
6.99
7.10
8.26
6.48
6.84
7.41
7.04
7.01
7.06
7.03
6.90
6.85
7.24
6.87
6.89
7.26
Electronic accessories
Fashion accessories
Food and beverages
Health and beauty
Home and lifestyle
Sports and travel
Product Line
8.2
8.0
7.8
7.6
7.4
7.2
7.0
6.8
6.6

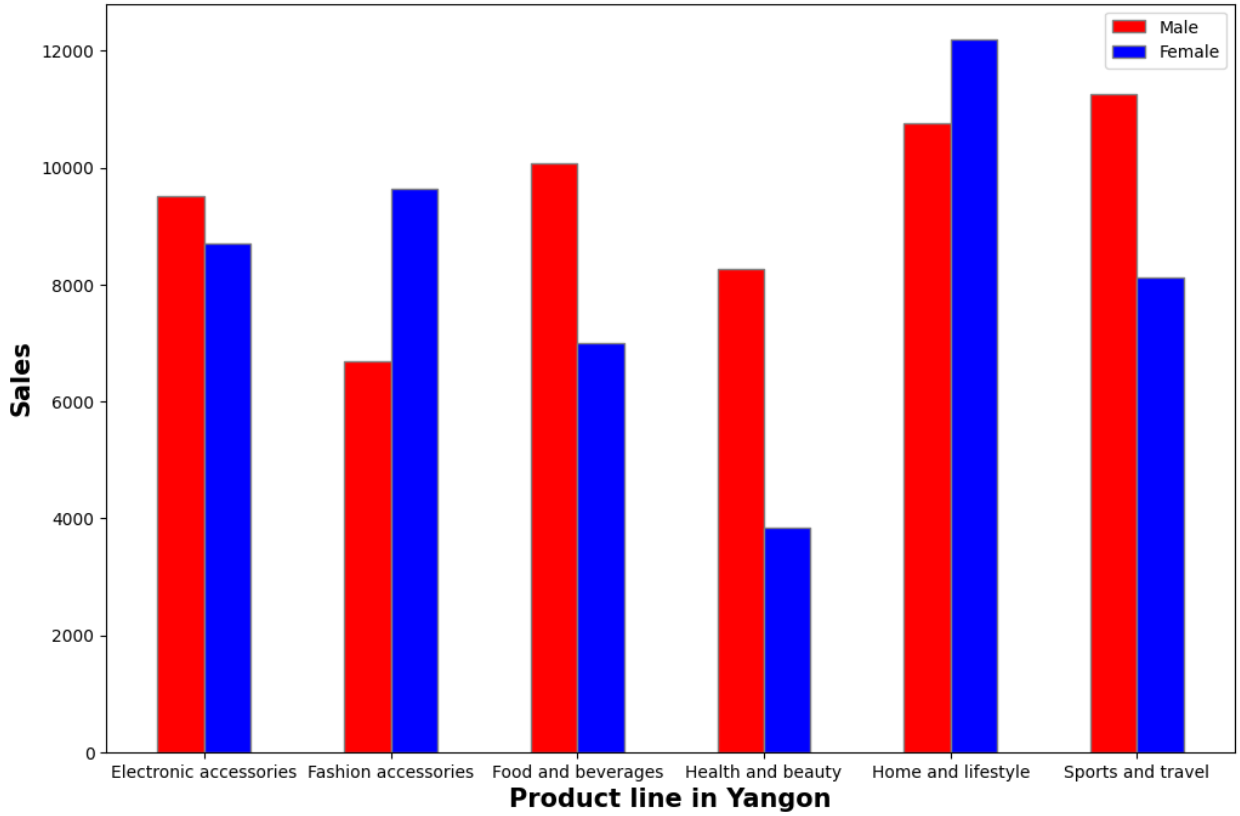

20000
17500
15000
12500
10000
7500
5000
2500
0
Sales
Electronic accessories
Fashion accessories
Food and beverages
Health and beauty
Home and lifestyle
Sports and travel
Product line in Mandalay

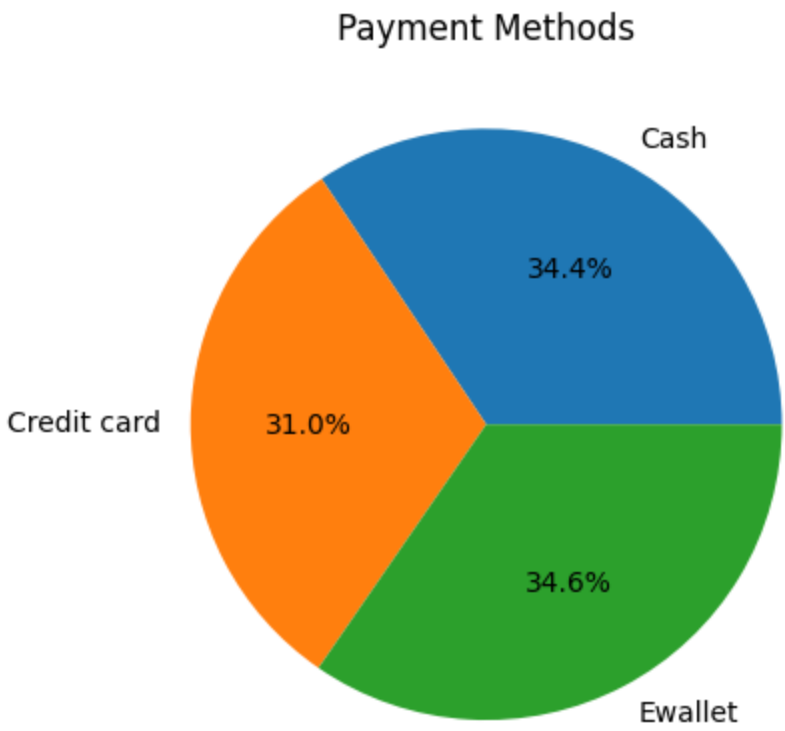

14000
12000
10000
8000
6000
4000
2000
0
Sales
Male
Female
Electronic accessories
Fashion accessories
Food and beverages
Health and beauty
Home and lifestyle
Sports and travel
Product line in Mandalay


25000
20000
15000
10000
5000
0
Sales
Electronic accessories
Fashion accessories
Food and beverages
Health and beauty
Home and lifestyle
Sports and travel
Product line in Naypyitaw


Male
Female
14000
12000
10000
8000
6000
4000
2000
0
Sales
Electronic accessories
Fashion accessories
Food and beverages
Health and beauty
Home and lifestyle
Sports and travel
Product line in Naypyitaw


20000
15000
10000
5000
0
Sales
Electronic accessories
Fashion accessories
Food and beverages
Health and beauty
Home and lifestyle
Sports and travel
Product line in Yangon


Male
Female
12000
10000
8000
6000
4000
2000
0
Sales
Electronic accessories
Fashion accessories
Food and beverages
Health and beauty
Home and lifestyle
Sports and travel
Product line in Yangon


Payment Methods
Cash
34.4%
Credit card
31.0%
34.6%
Ewallet