

06_customer_seg_maldata_report

December 23, 2022

1 Customer Segmentation Report

2 Import Data

CustomerID	Gender	Age	Income	Spending_Score
1	Male	19	15	39
2	Male	21	15	81
3	Female	20	16	6
4	Female	23	16	77
5	Female	31	17	40

3 Load Model Artifacts

4 Transform Dataset

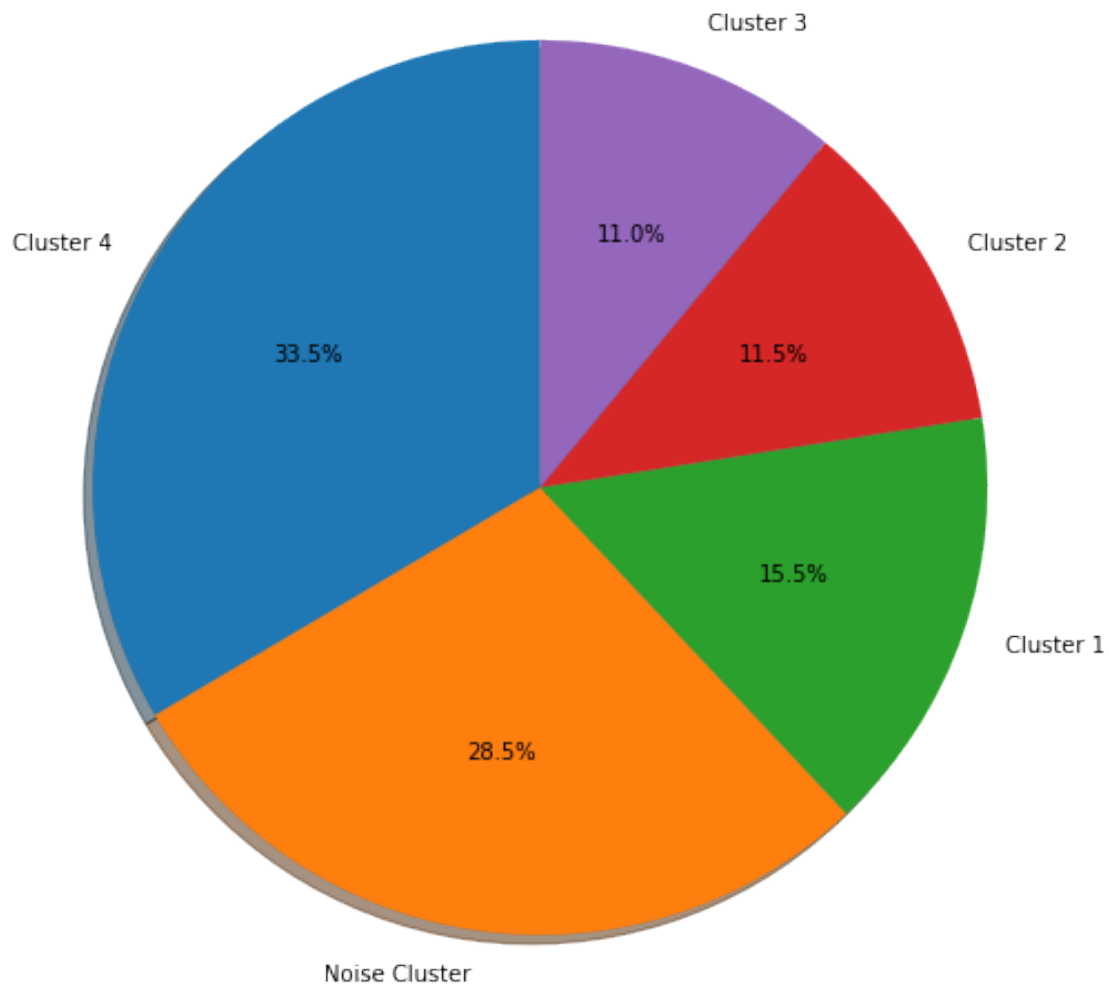
CustomerID	Age	Income	Spending_Score	Gender	cluster
1	19.0	15.0	39.0	Male	0
2	21.0	15.0	81.0	Male	0
3	20.0	16.0	6.0	Female	0
4	23.0	16.0	77.0	Female	4
5	31.0	17.0	40.0	Female	4

5 Data Visualization

```
4    67
0    57
1    31
2    23
3    22
Name: cluster, dtype: int64
```

5.1 What does the Cluster Distribution Look Like?

```
['Cluster 4', 'Noise Cluster', 'Cluster 1', 'Cluster 2', 'Cluster 3']
```



6 Determine Cluster Centers

['Age', 'Spending_Score'] did not aggregate successfully. If any error is raised this will raise in a future version of pandas. Drop these columns/ops to avoid this warning.

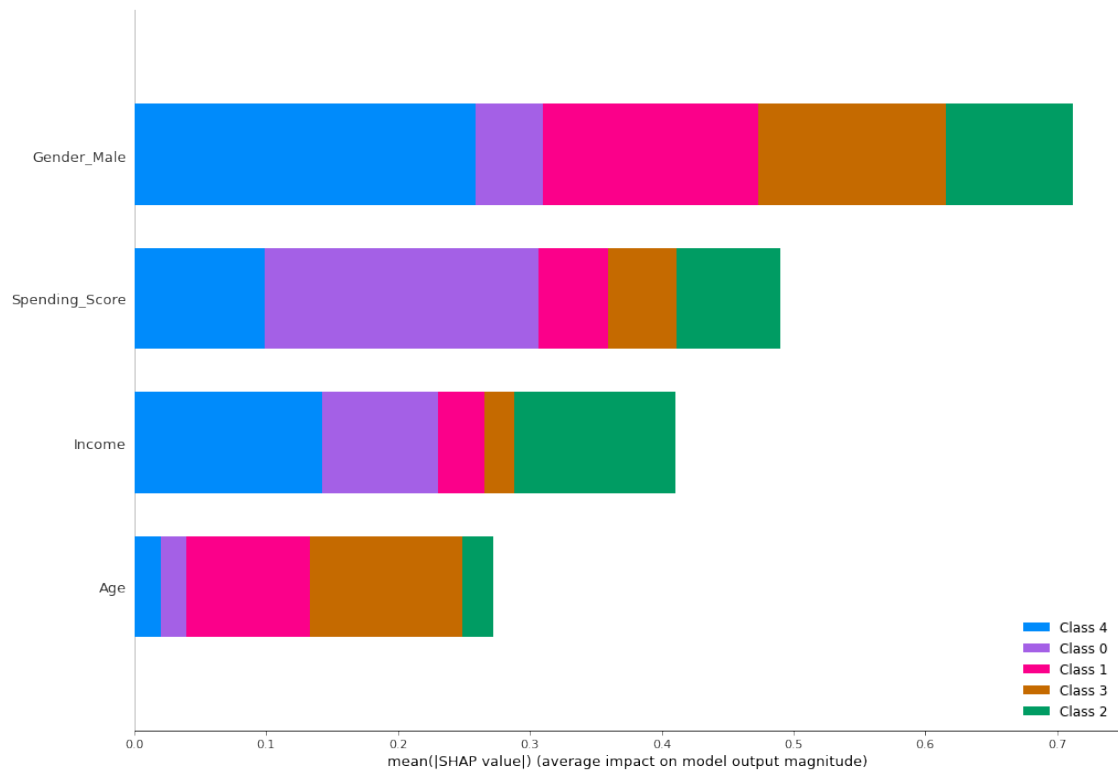
	Age	Income	Spending_Score	Gender
cluster				
0	39.596491	62.578947	26.333333	Male
1	29.677419	70.580645	70.516129	Male
2	32.347826	84.869565	78.826087	Female
3	57.545455	55.409091	47.363636	Male

4 38.552239 47.552239 52.208955 Female

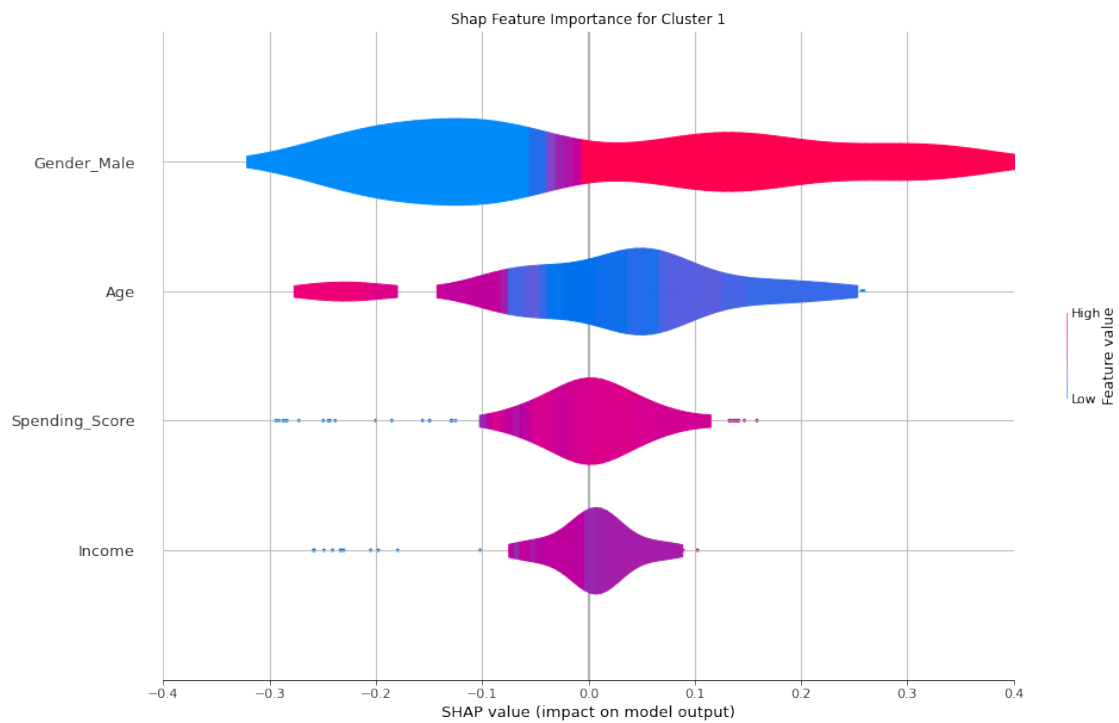
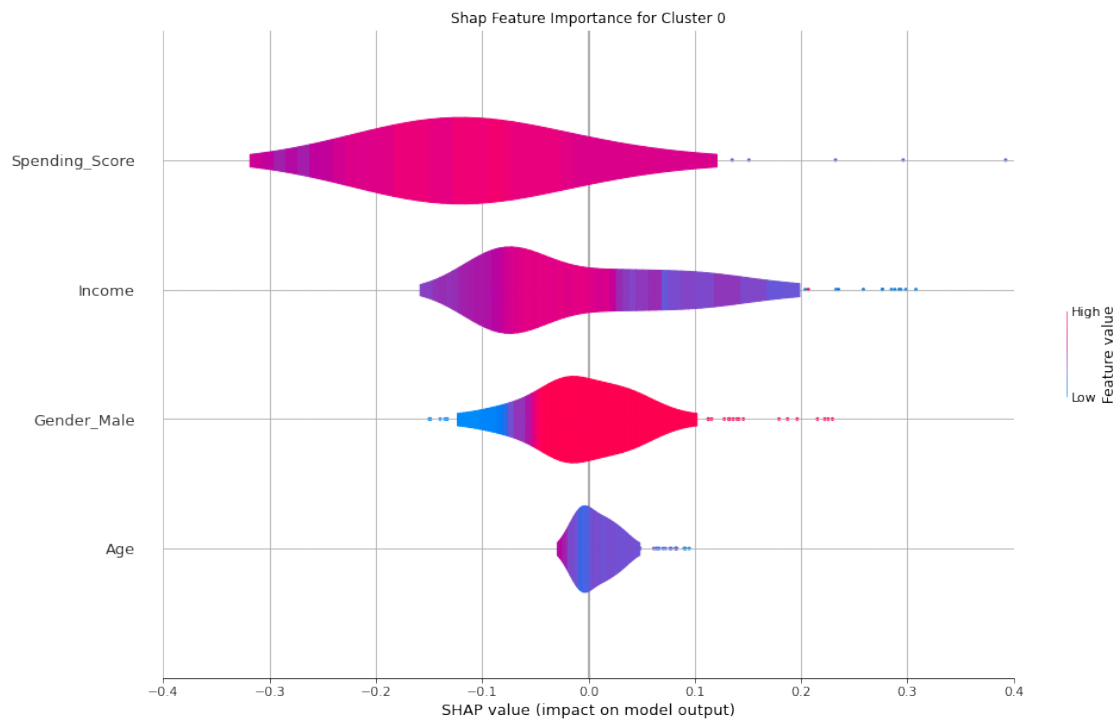
7 Explain Clusters

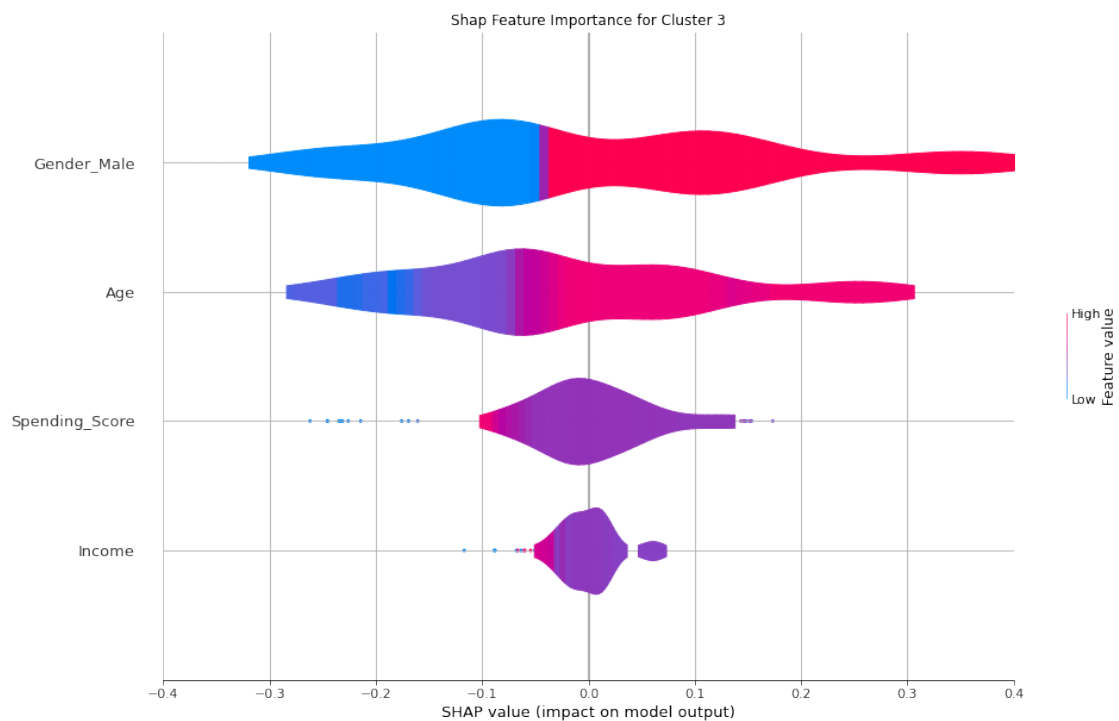
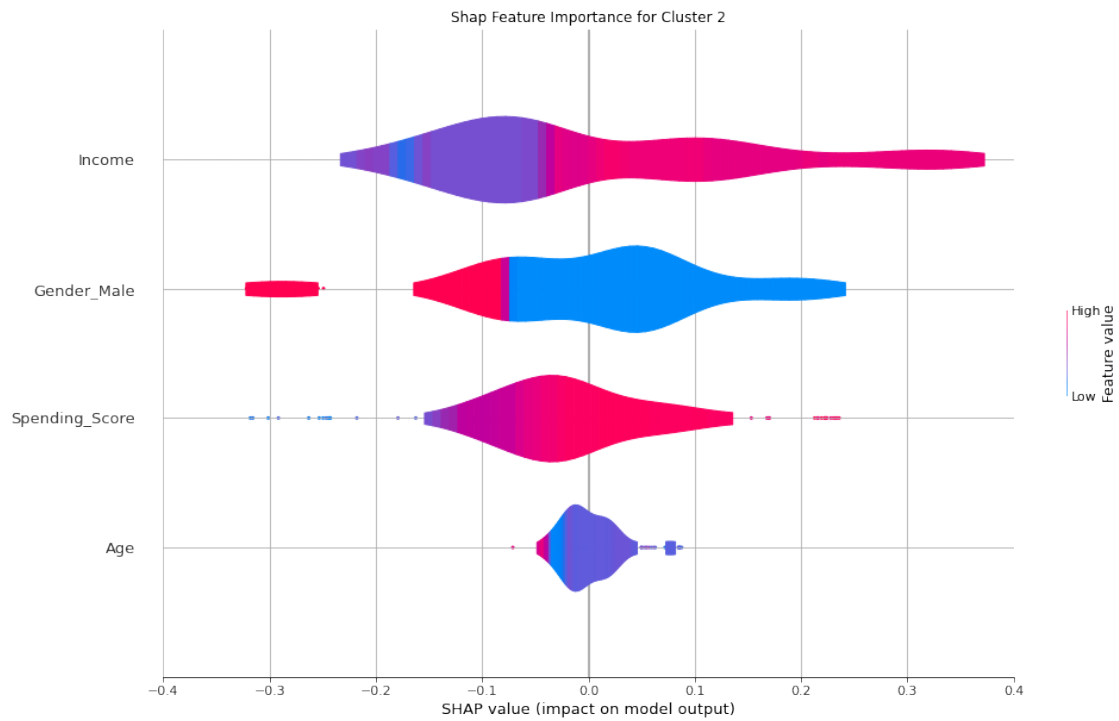
8 Custom Functions

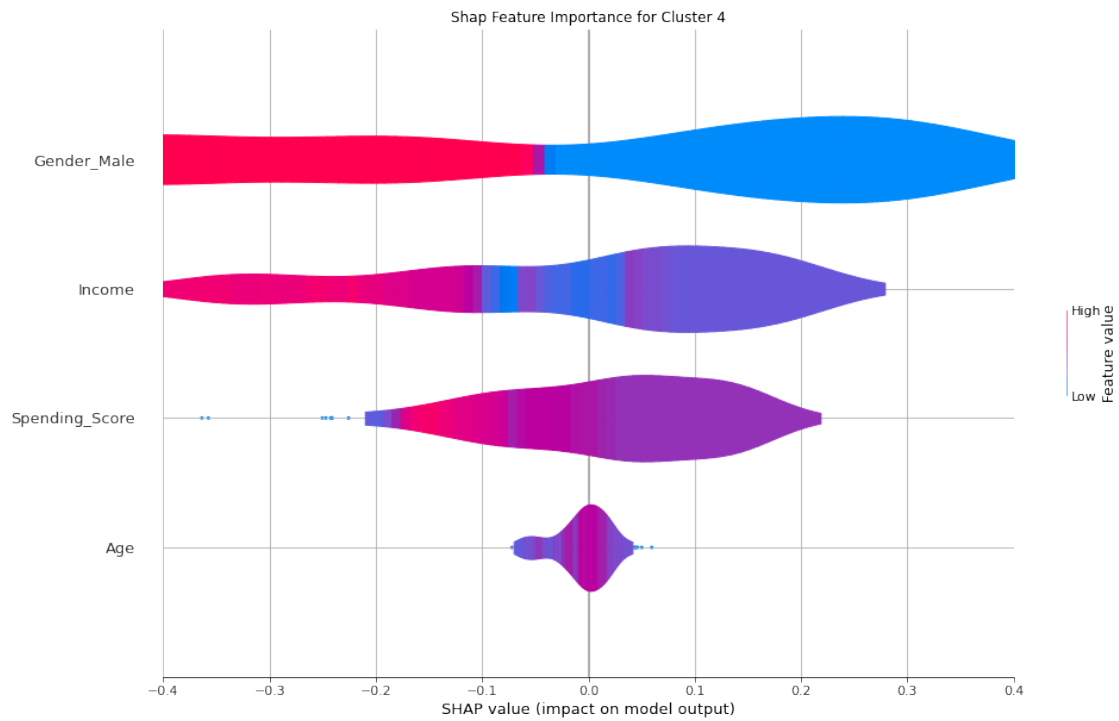
8.1 Average Feature Importance on Cluster Building



8.2 Explain Single Cluster vs Rest





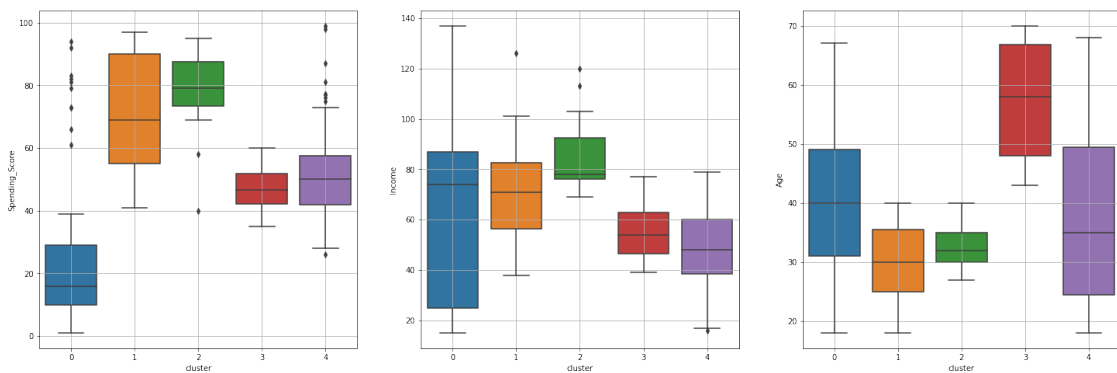


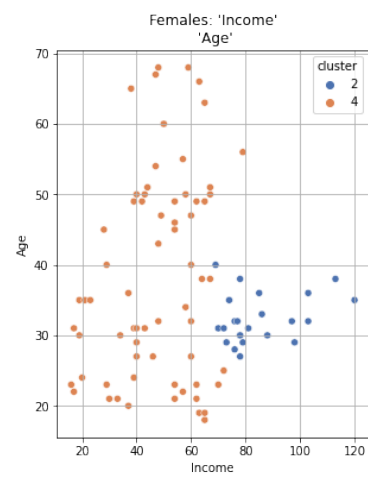
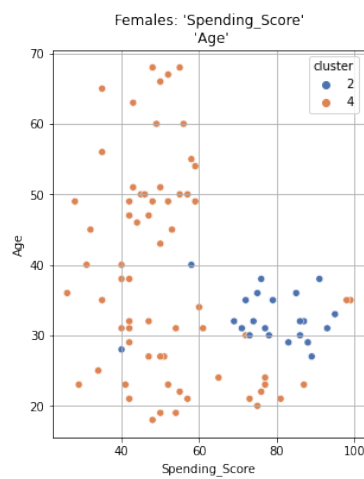
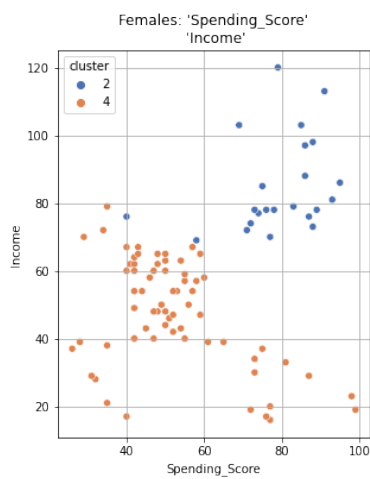
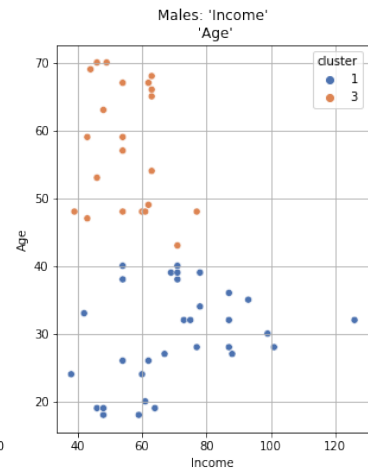
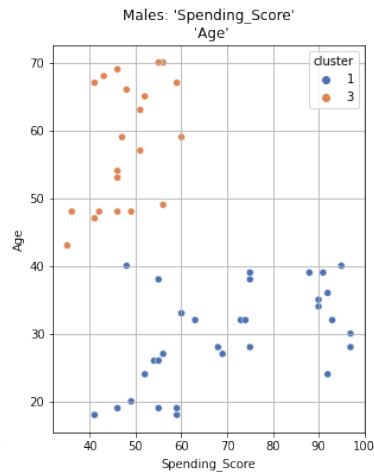
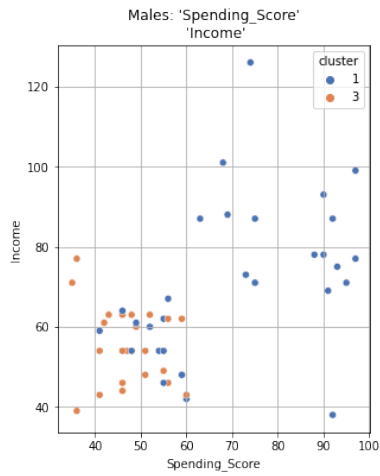
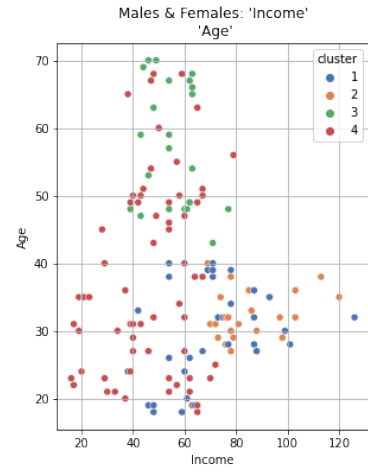
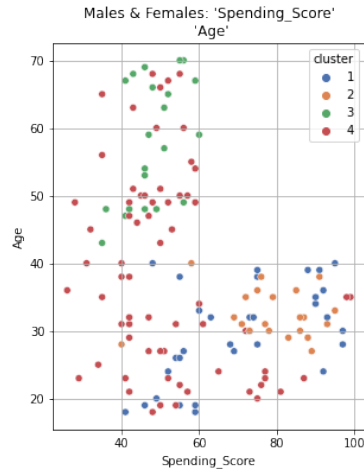
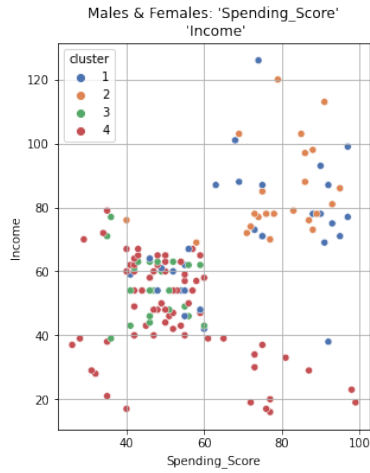
```
['Income', 'Gender_Male', 'Spending_Score', 'Age']
```

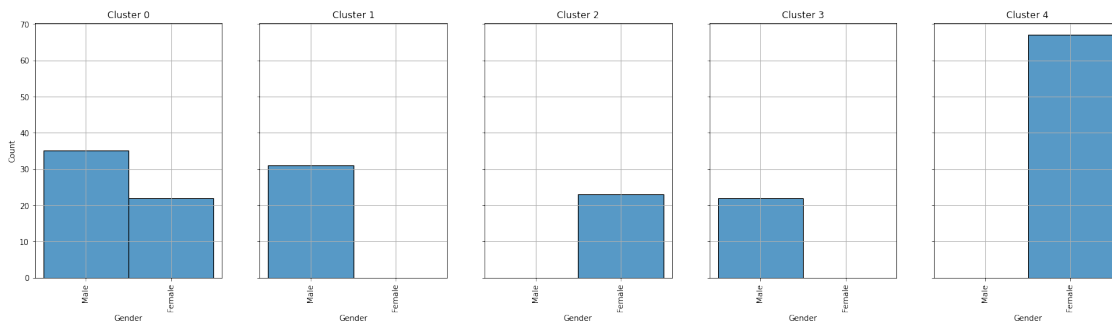
```
['Spending_Score', 'Income', 'Age', 'Gender_Male']
```

```
['Spending_Score', 'Income', 'Age']
```

```
['Gender']
```







C:\Users\Nutzer\.conda\envs\customer_analytics\lib\site-packages\traitlets\traitlets.py:2389: FutureWarning: Supporting extra quotes around strings is deprecated in traitlets 5.0. You can use '../reports' instead of "'../reports'" if you require traitlets >=5.

warn(

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citations
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