Customer Segmentation Report

Number of Clusters Formed: The K-Means algorithm was used to segment customers into **9 clusters**. This number was chosen to balance interpretability and performance, as evaluated using clustering metrics.

Davies-Bouldin Index (DB Index): The clustering achieved a **Davies-Bouldin Index (DB Index)** value of **0.849**. **Other Clustering Metrics:**

Cluster Sizes: The distribution of customers across clusters was as follows:

Cluster 0: 27 customers

Cluster 1: 29 customers

Cluster 2: 18 customers

Cluster 3: 35 customers

Cluster 4: 1 customers

Cluster 5: 26 customers

Cluster 6: 42 customers

Cluster 7: 6 customers

Cluster 8: 16 customers

Average Total spends:

Cluster 0: 4629.68

Cluster 1: 2274.55

Cluster 2: 3206.66

Cluster 3: 6217.7

Cluster 4: 0.00

Cluster 5: 2004.81

Cluster 6: 3585.03

Cluster 7: 1680.64

Cluster 8: 681.95

Average Quantity:

Cluster 0: 3.16

Cluster 1: 2.81

Cluster 2: 1.80

Cluster 3: 2.72

Cluster 4: 0.00

Cluster 5: 2.23

Cluster 6: 2.41

Cluster 7: 3.83

Cluster 8: 1.63

Average total purchases:

Cluster 0: 5.00

Cluster 1: 3.06

Cluster 2: 7.16

Cluster 3: 8.11

Cluster 4: 0.00

Cluster 5: 3.73

Cluster 6: 5.30

Cluster 7: 2.16

Cluster 8: 1.87