Customer Segmentation/Clustering

1. Loaded Data:

   - Combined data from Customers.csv and Transactions.csv.

2. Preprocessed Data:

   - Cleaned and prepared the data for clustering.

   - Handled missing values and scaled features for consistency.

3. Engineered Features:

   - Created relevant features from transaction data, such as total spending and transaction frequency.

4. Performed Clustering:

   - Applied a clustering algorithm (K-Means).

   - Experimented with different cluster numbers.

5. Evaluated Clusters:

   - Calculated clustering metrics, including the Davies-Bouldin Index (DB Index) and Silhouette Score.

6. Visualized Results:

   - Used PCA or t-SNE for dimensionality reduction.

   - Created visual representations of the identified clusters.