Clustering Results

Key Outputs:

Optimal Number of Clusters: 7

The code determines the optimal number of clusters using the Davies-Bouldin Index (DBI).
DBI Value:

- DBI for 2 clusters: 1.18
- DBI for 3 clusters: 1.11
- DBI for 4 clusters: 1.05
- DBI for 5 clusters: 1.31
- DBI for 6 clusters: 1.12
- DBI for 7 clusters: 0.99
- DBI for 8 clusters: 1.05
- DBI for 9 clusters: 1.00
- DBI for 10 clusters: 1.06

The minimum DBI value is 0.99, indicating the best clustering configuration.

- Silhouette Score for 2 clusters: 0.3543111003386848
- Silhouette Score for 3 clusters: 0.32594241581112826
- Silhouette Score for 4 clusters: 0.33791475823962924
- Silhouette Score for 5 clusters: 0.2804064839529183
- Silhouette Score for 6 clusters: 0.33008730899595523
- Silhouette Score for 7 clusters: 0.3482487257641776
- Silhouette Score for 8 clusters: 0.35777354373813436
- Silhouette Score for 9 clusters: 0.3596851043985674 3
- Silhouette Score for 10 clusters: 0.3467325604090716

Clustered Dataset:

The final dataset with cluster assignments is saved as ClusteringResults.csv