

Number of Clusters Formed:

- **6 clusters** were identified as optimal based on the Davies-Bouldin Index (DB Index) evaluation.

Clustering Metrics:

- **DB Index: 1.30**
 - Indicates moderately good clustering with reasonable separation and compactness.
- **Silhouette Score: 0.22**
 - Reflects moderate overlap or boundary ambiguity between clusters.
- **Calinski-Harabasz Score: 49.58**
 - Suggests a moderate balance between cluster cohesion and separation.

Cluster Visualization:

- PCA was used to reduce dimensionality to two principal components.
- Clusters were visualized using a scatterplot, colored to represent each cluster.