Clustering part by Atharva Shetty

Clustering Metrics:

- **Number of Clusters Formed**: 4 (based on the PCA results and cluster validation)
- **Davies-Bouldin Index**: 0.0814

  A lower value indicates that the clusters are well-separated and compact.
- **WCSS**: 0.83
- **Silhouette Score**: 0.9433

  The silhouette score measures how similar each point is to its own cluster compared to other clusters. A higher score indicates better-defined clusters.
- **Calinski-Harabasz Score**: 11640.67

  This score assesses the dispersion of clusters. A higher score generally suggests well-separated and well-formed clusters.