

1. Number of Clusters:

- The analysis used the K-Means clustering algorithm with the elbow method and Davies-Bouldin Index to determine the optimal number of clusters.
- The optimal number of clusters identified is 5.

2. DB Index Value:

- The Davies-Bouldin Index (DBI) for the clustering solution with 5 clusters is approximately 1.15.
- The DBI measures the average similarity between each cluster and its most similar cluster. Lower DBI values indicate better clustering solutions with well-separated and compact clusters.

3. Other Relevant Clustering Metrics:

Besides the DBI, consider these additional metrics to evaluate the clustering results:

- **Silhouette Score: 0.27**
 - Measures how similar a data point is to its cluster compared to other clusters.
 - Values range from -1 to +1, with higher values representing better clustering.
- **Inertia: 295.65**
 - It is the sum of squared distances of samples to their closest cluster centre.
 - Lower inertia values generally indicate better clustering, but the elbow method helps find a good balance between inertia and the number of clusters.
- **Calinski-Harabasz Index: 83.16**
 - The Calinski-Harabasz index (also known as the Variance Ratio Criterion) is a measure of the between-cluster variance to the within-cluster variance.
 - Higher values indicate better clustering.

4. Interpretation:

- The relatively low DB Index (1.15) suggests a reasonably good clustering solution, indicating clusters are relatively well-separated.