

## **Customer Segmentation / Clustering:**

### **Davies-Bouldin (DB) Index**

The Davies-Bouldin (DB) index is an internal validation metric used to assess the quality of a clustering solution. It is a relative clustering validity index, meaning that it compares the clustering results to a hypothetical "ideal" clustering.

A lower DBI value indicates a better clustering solution.

- Higher DB index values correspond to poorer clustering solutions. This is because a higher DBI value indicates that the clusters are not well-separated and/or have uneven cluster sizes.

### **Silhouette Score**

The Silhouette Score (SS) is another internal validation metric used to assess the quality of a clustering solution. It measures the silhouette coefficient, which is a measure of how well each data point is assigned to its cluster.

A silhouette coefficient value closer to 1 indicates a better clustering solution.

- Values close to 1: Points are well-clustered with a clear separation between clusters.
- Values near 0: Points are on or near the decision boundary between clusters.
- Values close to -1: Points have been probably assigned to the wrong cluster.