

## 1. Number of Groups Formed

After analyzing the data, we decided to divide the customers into **4 groups (clusters)**. This was based on a method called the "Elbow Method," which helped us find the best number of groups by balancing accuracy and simplicity.

## 2. Davies-Bouldin Index (DB Index)

The model scored {db\_index} for the Davies-Bouldin Index.

- This score tells us how well the groups are separated and how compact they are.
- A lower score means the groups are clear and well-separated.

**3. Inertia:** This shows how close the customers in a group are to each other. Lower values are better.

## 4. Visualizing the Groups

We created a simple chart to show how the groups look when plotted in two dimensions:

- Each group is shown in a different color, and they are clearly separated.
- The chart was made using a method called PCA, which simplifies the data for easy visualization.



