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**Course: Machine Learning**

**Github Link:** [**https://github.com/vinay779/assignment\_6**](https://github.com/vinay779/assignment_6)

**Video Link:** [**https://youtu.be/mTK2d0MdoZU**](https://youtu.be/mTK2d0MdoZU)

**Question 1:**

**calculate and find out clustering representations and dendrogram using Single, complete, and average link proximity function in hierarchical clustering technique.**

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**Diagram

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**Question 2:**

**Using CC\_GENERAL.csv given in the folder and apply:**

**a) Preprocess the data by removing the categorical column and filling the missing values.**

**b) Apply StandardScaler() and normalize() functions to scale and normalize raw input data.**

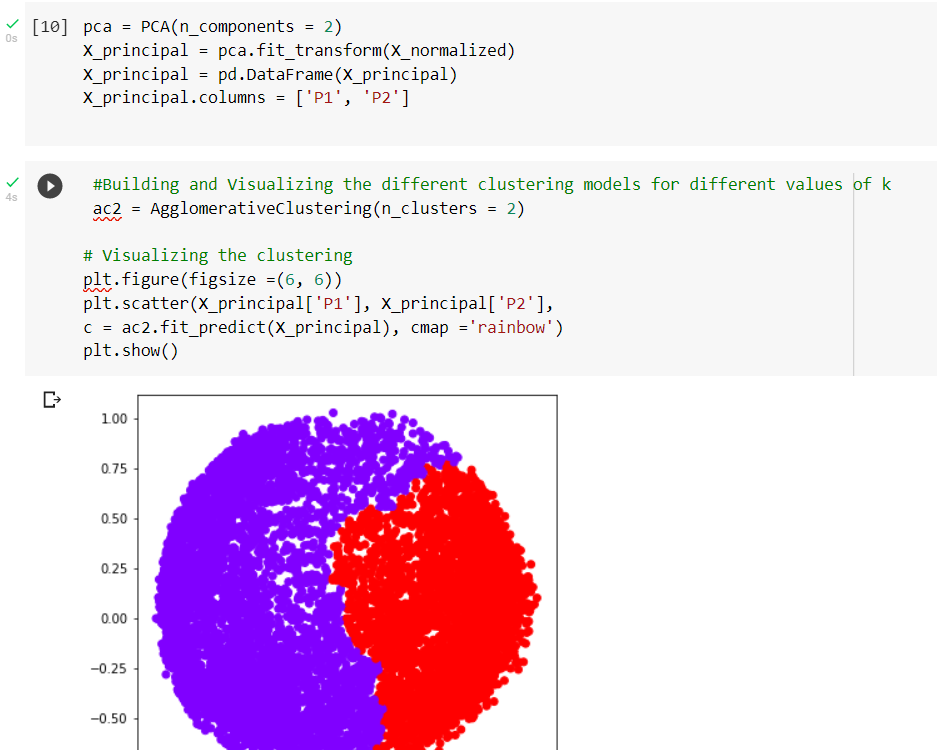
**c) Use PCA with K=2 to reduce the input dimensions to two features.**

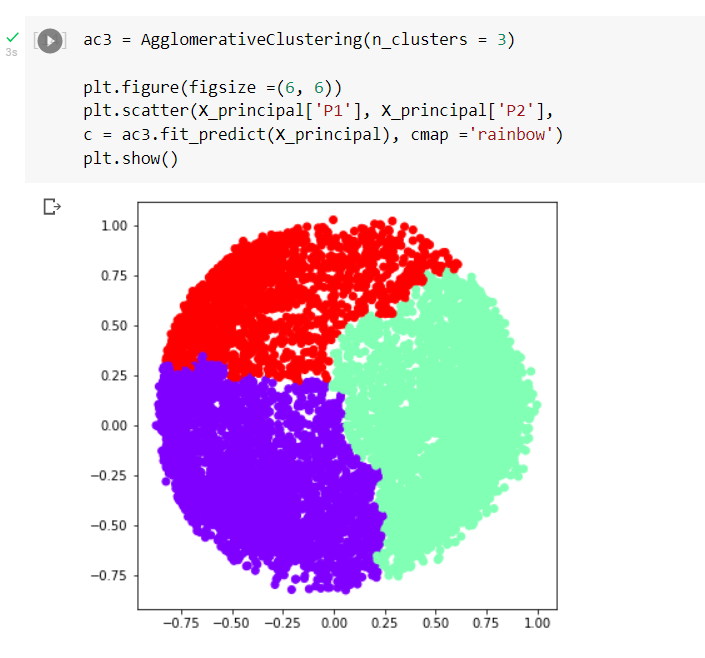
**d) Apply Agglomerative Clustering with k=2,3,4 and 5 on reduced features and visualize result for each k value using scatter plot.**

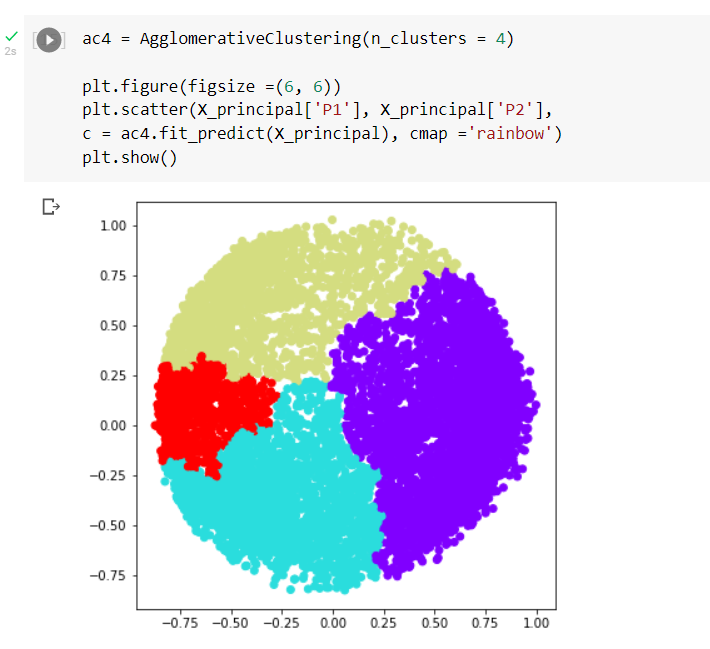
**e) Evaluate different variations using Silhouette Scores and Visualize results with a bar chart**

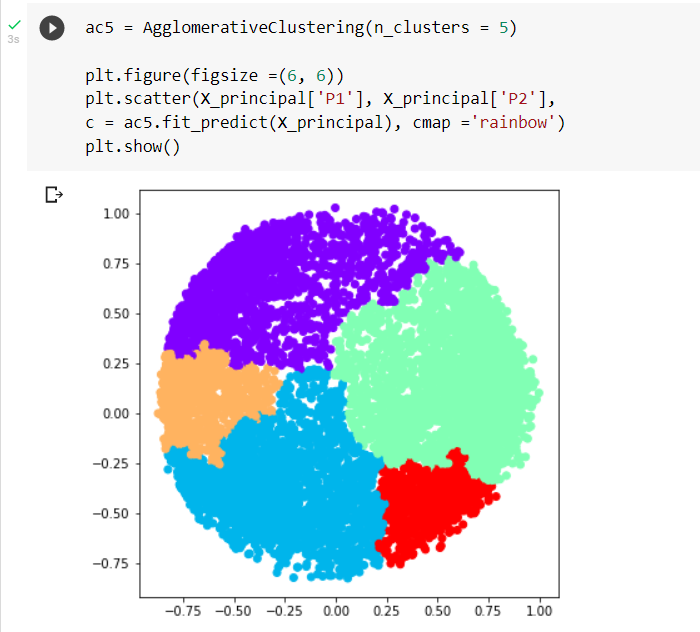
**Text

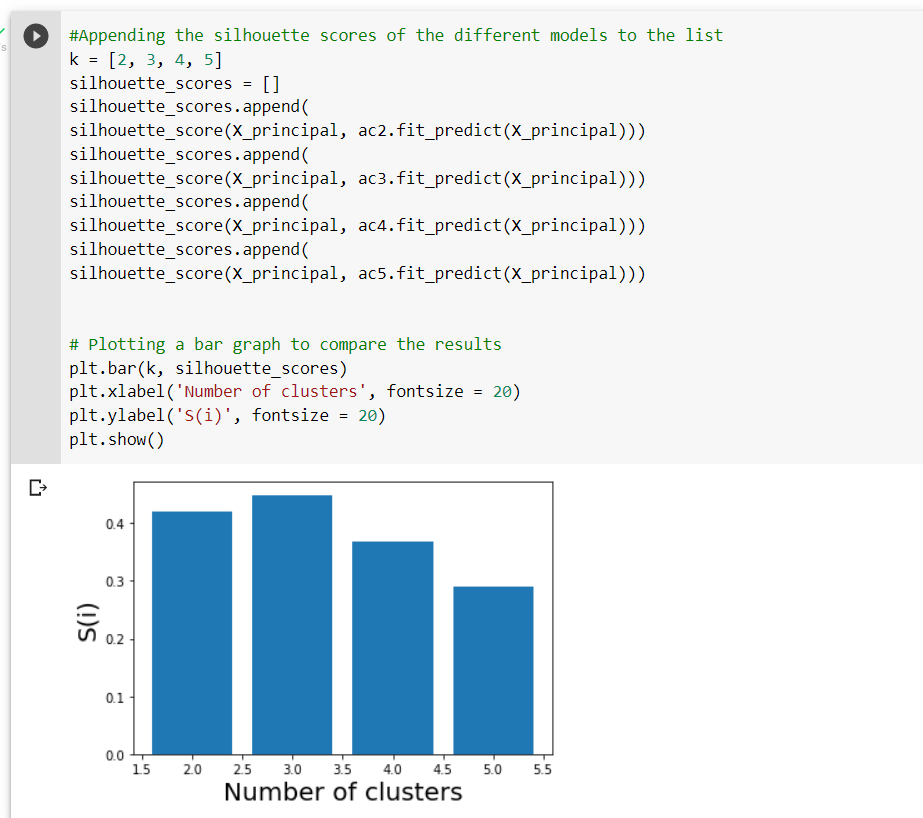
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