**ASSIGNMENT 5**

Student Name: Uday Kumar Kuppam

Student ID: 700739768

CRN: 13469

GitHub Link: <https://github.com/KUPPAM-700739768/Assignment5_700739768_ML>

Video Link: <https://youtu.be/tKJ3459gxv0>

Question 1:

1. Principal Component Analysis a. Apply PCA on CC dataset.

b. Apply k-means algorithm on the PCA result and report your observation if the silhouette score has improved or not?

c. Perform Scaling+PCA+K-Means and report performance.

🡪Import the required libraries

Graphical user interface, text

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🡪Load the Credit Card Data using read\_csv

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🡪Apply PCA on the CC dataset

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🡪Convert the string values to float and standardize the data to have mean of 0 and a variance of 1

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🡪Save components to a dataframe

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Plot the number of clusters   
Chart, line chart

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Table

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The silhouette score has improved.

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* 1. 2. Use pd\_speech\_features.csv a. Perform Scaling
  2. b. Apply PCA (k=3)
  3. c. Use SVM to report performance

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Text, table

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3. Apply Linear Discriminant Analysis (LDA) on Iris.csv dataset to reduce dimensionality of data to k=2.

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Chart, scatter chart

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