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Machine Learning

ICP 5

A black screen with green text

Description automatically generated

Performed elbow method to determine number of clusters for k-means.

A screen shot of white text

Description automatically generated

Performed k-means to the data set raw, only PCA, only scaled, and both scaled then PCA. PCA’s were chosen to be 3. PCA improved this data’s performance but scaling reduced to the performance of the k-means.

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Description automatically generated

The SVM performed well after data scaling and PCA of 3 being applied to the data, accurately predicting the class about 80% of the time.

A screenshot of a computer screen

Description automatically generated

LDA where number of components = 2 was applied to the Iris dataset, resulting in the table above after being converted into a data frame.

A screenshot of a computer

Description automatically generated

Above is the explanation of the difference between PCA and LDA.