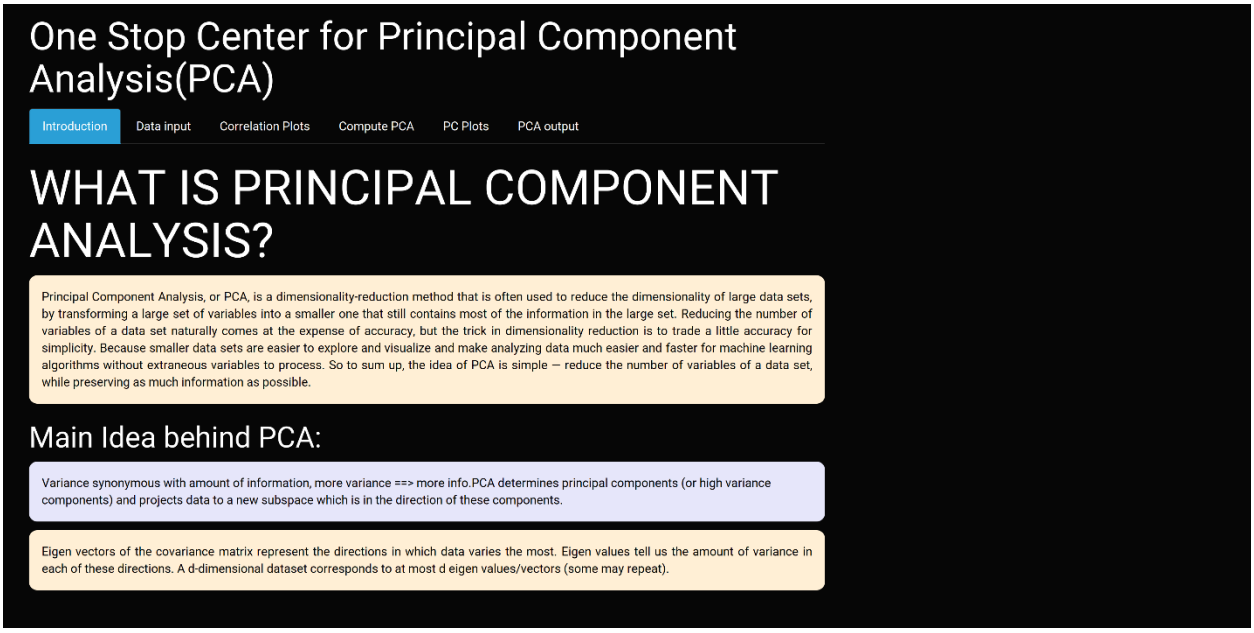
One Stop Center for principal Component Analysis (PCA)

This shiny application takes a CSV file of clean data, allows you to inspect the data and compute a Principal Components Analysis, and will return several diagnostic plots and tables. The plots include a correlation matrix, a scree plot, and a biplot of Principal Components.

This PCA dashboard has Six (6) tabs namely, Introduction, Data input, Corelation plots, Compute PCA, PC plots, PCA output.

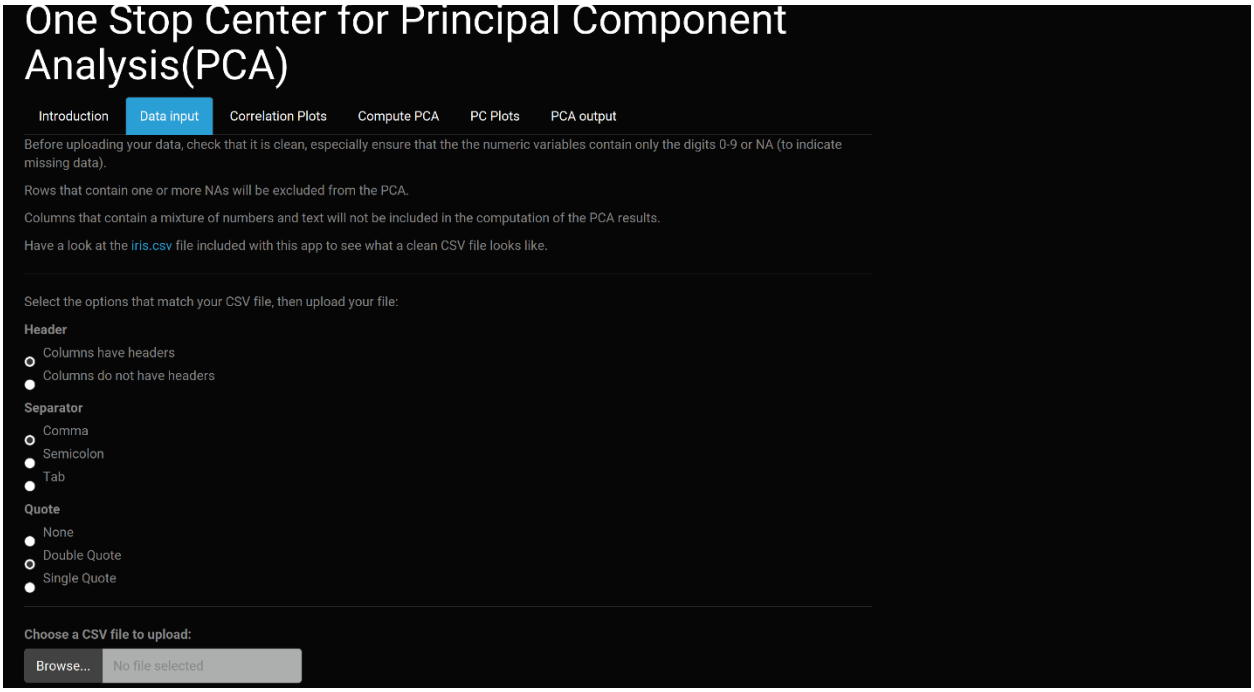
The introduction tab of this shiny application gives an introduction to what Principal Component Analysis is and what is the main idea behind PCA.

Here is a screenshot of the introduction tab of the shiny app One Stop Center for principal Component Analysis (PCA).



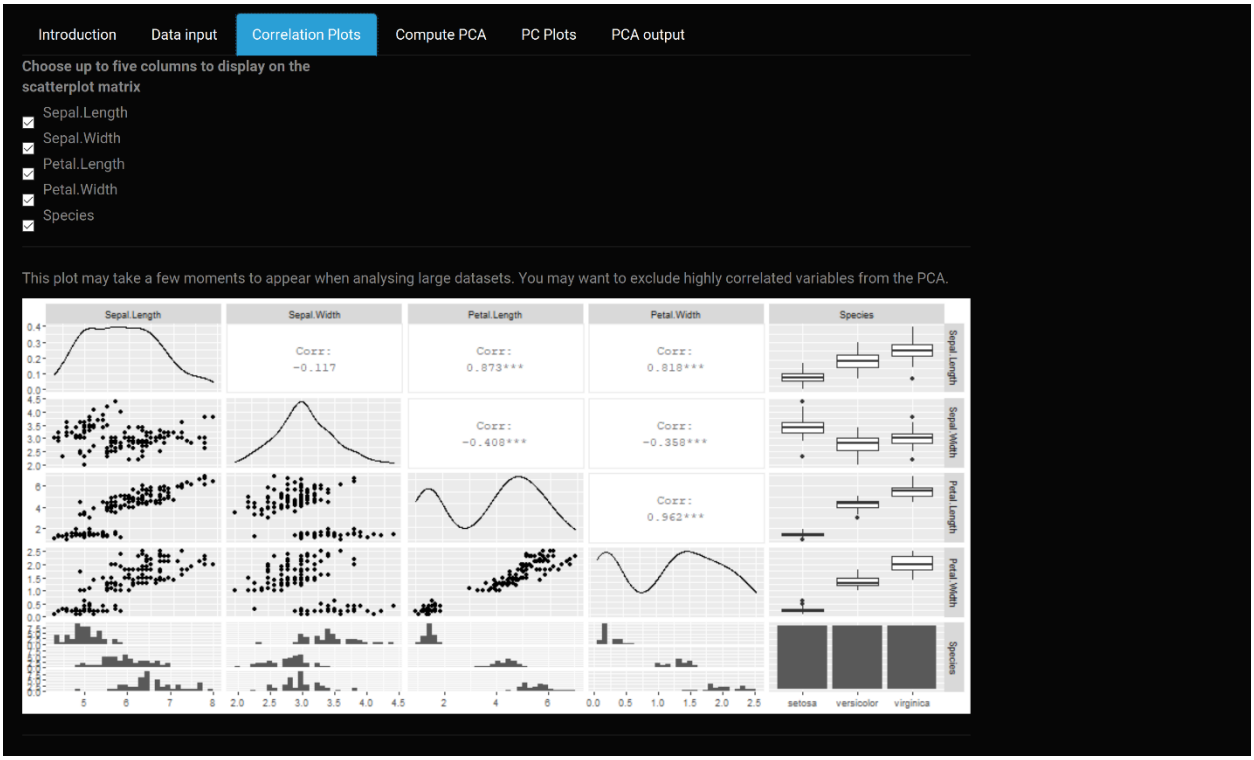
The second tab of the shiny application is the Data input tab, which is the first step in computing PCA for the given dataset. We can upload the dataset into the application using this tab.

Here is a screenshot of the Data input tab of the shiny app One Stop Center for principal Component Analysis (PCA).



The third tab of the shiny application is the Correlation plot tab, Here in this tab we can select the features of the dataset that we want to have the plot for by ticking or selecting the boxes corresponding to the features.

Here is a screenshot of the Correlations plot tab of the shiny app One Stop Center for principal Component Analysis (PCA).

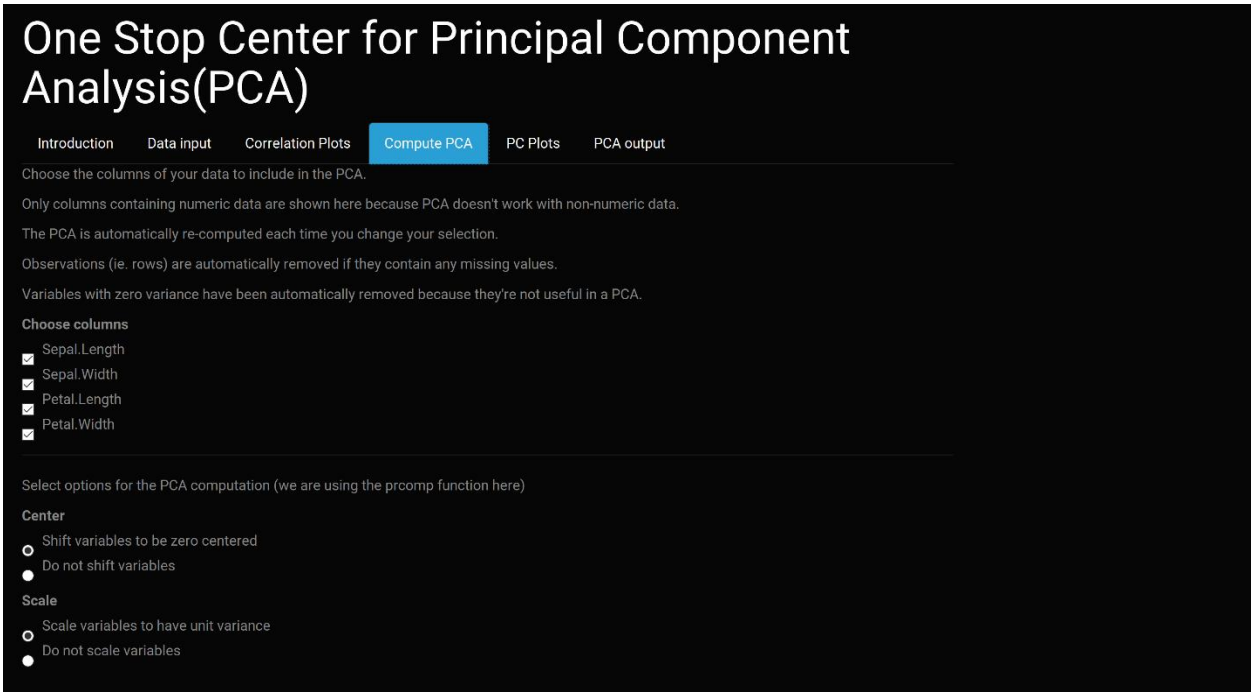


The fourth tab of the shiny application is the Compute PCA tab which enables us to compute the principal components by giving us various options to chose from such as

Center – Shift variables to zero centered or don't shift

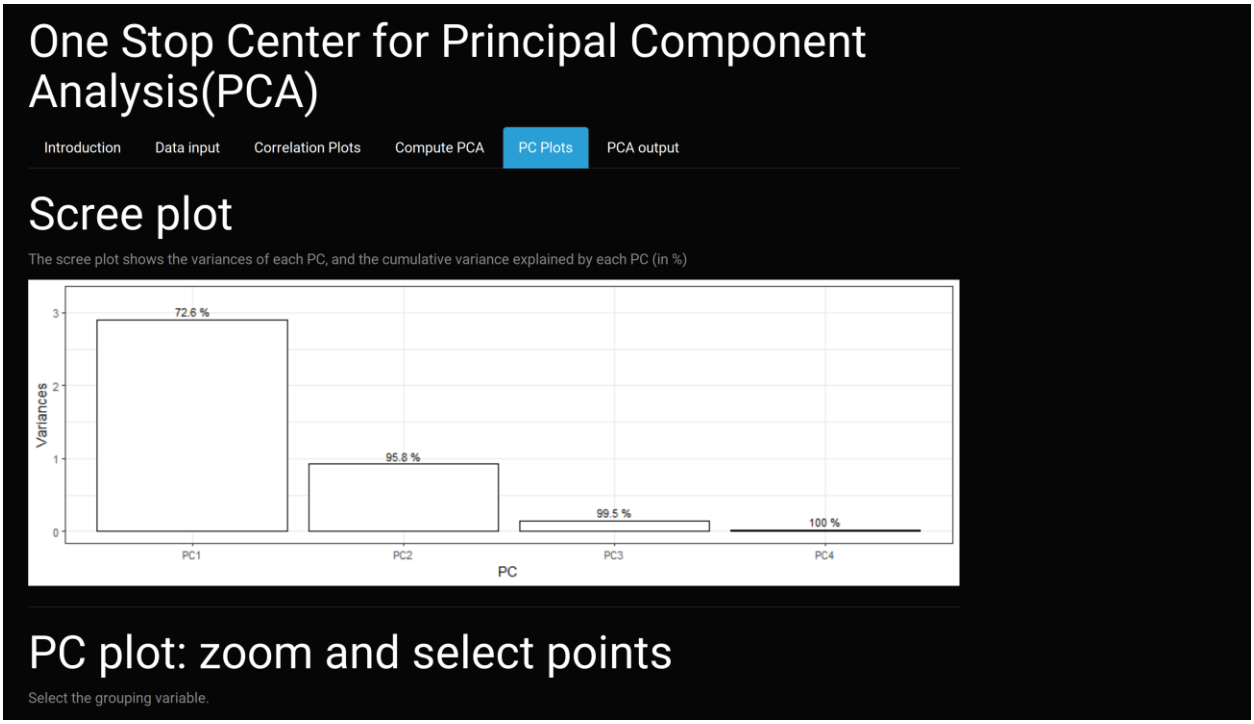
And also scaling features.

Here is a screenshot of the fourth tab.



The fifth tab namely, PC plots gives us the plot of the principal components.

Here is screenshot of the fifth tab.



And the final tab that is the PCA output tab gives us the output PCA values for the given features of the dataset.