# Homework 0: Iris Flower

Class Name: CS5785/ORIE5750/ECE5414

Homework Number: Homework 0

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## Question 1

How many features/attributes are there per sample? How many different species are there, and how many samples of each species did Anderson record?

- number of attributes per sample: 4
- number of different species: 3
- number of samples of each species: 50

## Question 2

```
import pandas as pd
import numpy as np

url = 'https://archive.ics.uci.edu/ml/machine-learning-databases/iris/iris.data'
df = pd.read_csv(url, names=names)
df.columns=["Col1","Col2","Col3","Col4","Col5"]

iris_x = df[["Col1","Col2","Col3","Col4"]]
iris_x = np.array(X)
print iris_x
```

```
print len(iris_x)

y = df["Col5"]
iris_y = np.array(y)
print iris_y
print len(iris_y)
```

# Question 3

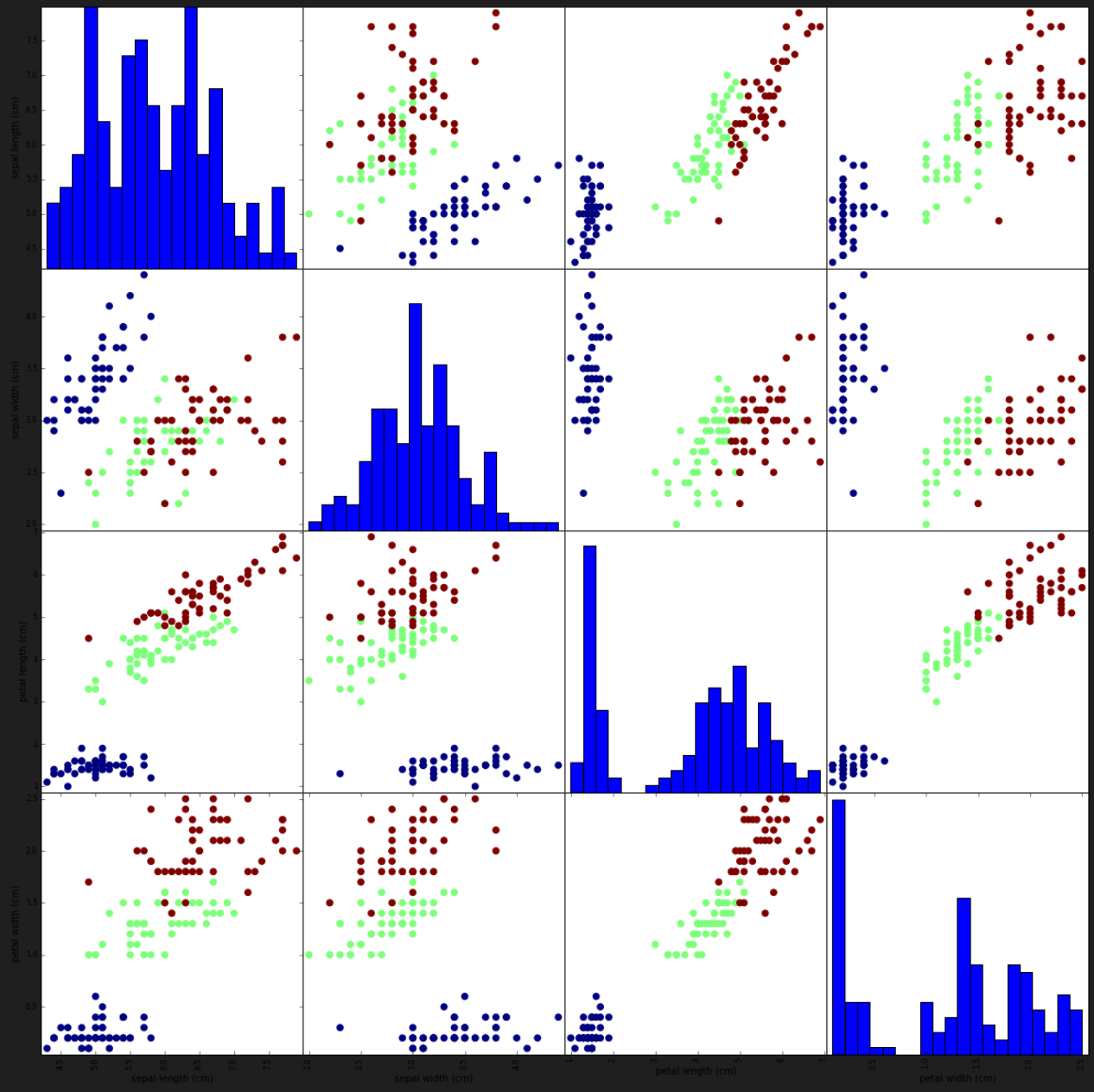
1.Tranform array into DataFrame.

2.Use scatter_matrix function to plot Scatterplot Matrix.

```
%matplotlib inline

from sklearn.datasets import load_iris
iris_dataset = load_iris()
iris_data = iris_dataset.data
iris_target = iris_dataset.target
print iris_data
print iris_target

import matplotlib.pyplot as plt
iris_df = pd.DataFrame(data,
columns=iris_dataset.feature_names)
figure = pd.plotting.scatter_matrix(iris_df,
                                    c=iris_target,
                                    figsize=(20,20),
                                    marker='o',
                                    hist_kwds =
{'bins':20},
                                    s=60,
                                    alpha=1.0)
```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