import pandas as pd

import numpy as np

import seaborn as sns

import matplotlib.pyplot as plt

dataset=pd.read\_csv("IRIS.csv")

dataset.head()

dataset.describe()

#Spliting the dataset in independent and dependent variables

X = dataset.iloc[:,:4].values

y = dataset['species'].values

#Splitting the dataset into the Training set and Test set

from sklearn.model\_selection import train\_test\_split

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size = 0.20, random\_state = 82)

from sklearn.preprocessing import StandardScaler

sc = StandardScaler()

X\_train = sc.fit\_transform(X\_train)

X\_test = sc.transform(X\_test)

from sklearn.naive\_bayes import GaussianNB

nvclassifier = GaussianNB()

nvclassifier.fit(X\_train, y\_train)

# Predicting the Test set results

y\_pred = nvclassifier.predict(X\_test)

print(y\_pred)

y\_compare = np.vstack((y\_test,y\_pred)).T

y\_compare[:5,:]

from sklearn.metrics import confusion\_matrix

cm = confusion\_matrix(y\_test, y\_pred)

print(cm)

a=cm.shape

corrPred = 0

falsePred = 0

for row in range(a[0]):

for col in range(a[1]):

if row == col:

corrPred +=cm[row,col]

else:

falsePred += cm[row,col]

print('Correct predictions: ', corrPred)

print('False predictions', falsePred)

print ('\n\nAccuracy of the Naive Bayes Clasification is: ', corrPred/(cm.sum()))