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import pandas as pd
import numpy as np
data=pd.read_csv("iris.csv")
x=data.iloc[:, :-1].values
print(x)
y=data.iloc[:, -1].values
print(y)
#Encoding the category
from sklearn.preprocessing import LabelEncoder
y=LabelEncoder().fit_transform(y)
print(y)
#split train and test data
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test=train_test_split(x,y,test_size=0.2,random_state=3)
print(x_train)
print(y_train)
#train the model
from sklearn.naive_bayes import GaussianNB
gnb=GaussianNB()
gnb.fit(x_train,y_train)
#Prediction using Baye
y_predict=gnb.predict(x_test)
print("Predicted Value by model ",y_predict)
print("Actual value in dataset ",y_test)
#confusion matrix
from sklearn.metrics import confusion_matrix
confusion_mat=confusion_matrix(y_test,y_predict)
print("confusion matrix \n",confusion_mat)
#Classifier Accuracy
from sklearn.metrics import accuracy_score
accuracy=accuracy_score(y_test,y_predict)*100
print("Accuracy of Gaussian Model",accuracy)
"""input=[5.1, 3.5 , 1.4, 0.2]
output=gnb.predict(input)
print("predicted output\n",output)"""

```