

```

#import numpy and pandas
import numpy as np
import pandas as pd
#create dataset
df=pd.read_csv("/content/Iris.csv")
df

#print column,shape,head,tail of the dataset
df.columns
df.shape
df.head
df.tail

#remove id from the dataset
df=df.drop(['Id'],axis=1)
df

#seperate x and y
x=df.iloc[:, :-1].values
y=df.iloc[:, -1].values

#converting x and y to training and testing data
from sklearn.model_selection import train_test_split
x_train,x_test,y_train,y_test=train_test_split(x,y,test_size=0.15)

#normalization
from sklearn.preprocessing import StandardScaler
scaler=StandardScaler()
scaler.fit(x_train)
x_train=scaler.transform(x_train)
x_test=scaler.transform(x_test)

#model creation
from sklearn.neighbors import KNeighborsClassifier
classifier=KNeighborsClassifier(n_neighbors=7)
classifier.fit(x_train,y_train)
#prediction
y_pred=classifier.predict(x_test)
y_pred

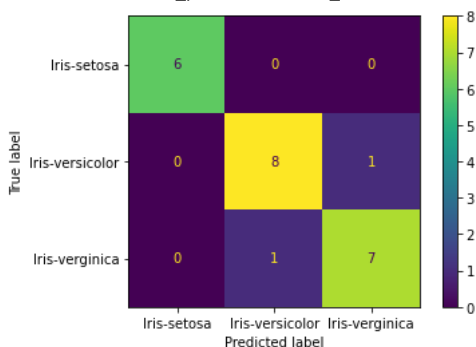
#model accuracy check using confusion metrics
from sklearn.metrics import classification_report,accuracy_score,confusion_matrix
result=confusion_matrix(y_test,y_pred)
#result
score=accuracy_score(y_test,y_pred)
score

📄 0.9130434782608695

#confusion metrics display
#import confusion_metrics_display along with from sklearn.metrics import classification_report,accuracy_score,confusion_matrix
from sklearn.metrics import classification_report,accuracy_score,confusion_matrix,ConfusionMatrixDisplay
#assigning label to each category
label=['Iris-setosa','Iris-versicolor','Iris-verginica']
cmd=ConfusionMatrixDisplay(result,display_labels=label)
cmd.plot()

```

<sklearn.metrics._plot.confusion_matrix.ConfusionMatrixDisplay at 0x7f6410ebe890>



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