



In [ ]: #9

```
from google.colab import files
uploaded = files.upload()

import numpy as np
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.neighbors import KNeighborsClassifier
from sklearn.metrics import classification_report

df = pd.read_csv('Iris.csv')
print(df.info())
print(df['variety'].value_counts())
print(df.head())

features = df.iloc[:, :-1].values
label = df.iloc[:, 4].values
print(features)

xtrain, xtest, ytrain, ytest = train_test_split(features, label, test_size=0.2)
model_KNN = KNeighborsClassifier(n_neighbors=5)
model_KNN.fit(xtrain, ytrain)

print(classification_report(label, model_KNN.predict(features)))
```

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Saving Iris.csv to Iris.csv  
 <class 'pandas.core.frame.DataFrame'>  
 RangeIndex: 150 entries, 0 to 149  
 Data columns (total 5 columns):

#	Column	Non-Null Count	Dtype
0	sepal.length	150 non-null	float64
1	sepal.width	150 non-null	float64
2	petal.length	150 non-null	float64
3	petal.width	150 non-null	float64
4	variety	150 non-null	object

dtypes: float64(4), object(1)

memory usage: 6.0+ KB

None

variety

Setosa 50

Versicolor 50

Virginica 50

Name: count, dtype: int64

	sepal.length	sepal.width	petal.length	petal.width	variety
0	5.1	3.5	1.4	0.2	Setosa
1	4.9	3.0	1.4	0.2	Setosa
2	4.7	3.2	1.3	0.2	Setosa
3	4.6	3.1	1.5	0.2	Setosa
4	5.0	3.6	1.4	0.2	Setosa

[[5.1 3.5 1.4 0.2]

[4.9 3. 1.4 0.2]

[4.7 3.2 1.3 0.2]

[4.6 3.1 1.5 0.2]

[5. 3.6 1.4 0.2]

[5.4 3.9 1.7 0.4]

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[5.9 3.  5.1 1.8]]

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	precision	recall	f1-score	support
Setosa	1.00	1.00	1.00	50
Versicolor	0.98	0.94	0.96	50
Virginica	0.94	0.98	0.96	50
accuracy			0.97	150
macro avg	0.97	0.97	0.97	150
weighted avg	0.97	0.97	0.97	150