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In [3]: 1 from sklearn.model_selection import train_test_split
        2 from sklearn.neighbors import KNeighborsClassifier
        3 from sklearn import datasets
        4 iris=datasets.load_iris()
        5 x_train,x_test,y_train,y_test=train_test_split(iris.data,iris.target,test_size=0.4)
        6
        7 print("dataset is split into training and testing...")
        8 print("size of training data and its label",x_train.shape,y_train.shape)
        9 print("size of training data and its label",x_test.shape,y_test.shape)
       10 for i in range(len(iris.target_names)):
       11     print("label",i,"-",str(iris.target_names[i]))
       12 classifier=KNeighborsClassifier(n_neighbors=3)
       13 classifier.fit(x_train,y_train)
       14 y_pred=classifier.predict(x_test)
       15 print("results of classification using k-nn with k=3")
       16 for r in range(0,len(x_test)):
       17     print("sample:",str(x_test[r]),"Actual-label:",str(y_test[r]),"predicted-label:",str(y_pred[r]))
       18 print("classification accuracy:",classifier.score(x_test,y_test)*100);

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dataset is split into training and testing...
size of training data and its label (90, 4) (90,)
size of training data and its label (60, 4) (60,)
label 0 - setosa
label 1 - versicolor
label 2 - virginica
results of classification using k-nn with k=3
sample: [5.8 4.  1.2 0.2] Actual-label: 0 predicted-label: 0
sample: [6.5 2.8 4.6 1.5] Actual-label: 1 predicted-label: 1
sample: [6.2 2.9 4.3 1.3] Actual-label: 1 predicted-label: 1
sample: [4.6 3.6 1.  0.2] Actual-label: 0 predicted-label: 0
sample: [5.5 3.5 1.3 0.2] Actual-label: 0 predicted-label: 0
sample: [7.6 3.  6.6 2.1] Actual-label: 2 predicted-label: 2
sample: [5.  3.2 1.2 0.2] Actual-label: 0 predicted-label: 0
sample: [5.  3.4 1.6 0.4] Actual-label: 0 predicted-label: 0
sample: [5.7 2.9 4.2 1.3] Actual-label: 1 predicted-label: 1
sample: [5.5 2.5 4.  1.3] Actual-label: 1 predicted-label: 1
sample: [4.6 3.2 1.4 0.2] Actual-label: 0 predicted-label: 0
sample: [5.  3.6 1.4 0.2] Actual-label: 0 predicted-label: 0
sample: [4.9 2.4 3.3 1. ] Actual-label: 1 predicted-label: 1
sample: [6.8 3.  5.5 2.1] Actual-label: 2 predicted-label: 2
sample: [6.  3.4 4.5 1.6] Actual-label: 1 predicted-label: 1

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sample: [5.1 2.5 3. 1.1] Actual-label: 1 predicted-label: 1
sample: [5.7 2.5 5. 2. ] Actual-label: 2 predicted-label: 2
sample: [5.4 3.7 1.5 0.2] Actual-label: 0 predicted-label: 0
sample: [4.4 3. 1.3 0.2] Actual-label: 0 predicted-label: 0
sample: [6. 3. 4.8 1.8] Actual-label: 2 predicted-label: 2
sample: [6.9 3.1 5.4 2.1] Actual-label: 2 predicted-label: 2
sample: [5.7 4.4 1.5 0.4] Actual-label: 0 predicted-label: 0
sample: [4.9 3.1 1.5 0.1] Actual-label: 0 predicted-label: 0
sample: [7.2 3.6 6.1 2.5] Actual-label: 2 predicted-label: 2
sample: [5. 3. 1.6 0.2] Actual-label: 0 predicted-label: 0
sample: [6. 2.7 5.1 1.6] Actual-label: 1 predicted-label: 2
sample: [6.4 2.8 5.6 2.2] Actual-label: 2 predicted-label: 2
sample: [6.3 2.5 4.9 1.5] Actual-label: 1 predicted-label: 2
sample: [5.1 3.8 1.5 0.3] Actual-label: 0 predicted-label: 0
sample: [5.5 2.3 4. 1.3] Actual-label: 1 predicted-label: 1
sample: [7.9 3.8 6.4 2. ] Actual-label: 2 predicted-label: 2
sample: [6.8 3.2 5.9 2.3] Actual-label: 2 predicted-label: 2
sample: [5.5 2.4 3.7 1. ] Actual-label: 1 predicted-label: 1
sample: [6.4 3.2 4.5 1.5] Actual-label: 1 predicted-label: 1
sample: [5.2 3.4 1.4 0.2] Actual-label: 0 predicted-label: 0
sample: [5.8 2.8 5.1 2.4] Actual-label: 2 predicted-label: 2
sample: [5.5 2.6 4.4 1.2] Actual-label: 1 predicted-label: 1
sample: [4.8 3. 1.4 0.3] Actual-label: 0 predicted-label: 0
sample: [4.6 3.4 1.4 0.3] Actual-label: 0 predicted-label: 0
sample: [5.8 2.7 5.1 1.9] Actual-label: 2 predicted-label: 2
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sample: [5. 3.5 1.6 0.6] Actual-label: 0 predicted-label: 0
sample: [5.4 3.9 1.3 0.4] Actual-label: 0 predicted-label: 0
sample: [7.3 2.9 6.3 1.8] Actual-label: 2 predicted-label: 2
sample: [5. 3.4 1.5 0.2] Actual-label: 0 predicted-label: 0
sample: [5.2 2.7 3.9 1.4] Actual-label: 1 predicted-label: 1
sample: [5.1 3.4 1.5 0.2] Actual-label: 0 predicted-label: 0
sample: [4.4 2.9 1.4 0.2] Actual-label: 0 predicted-label: 0
sample: [5.1 3.3 1.7 0.5] Actual-label: 0 predicted-label: 0
sample: [6.2 3.4 5.4 2.3] Actual-label: 2 predicted-label: 2
sample: [5.1 3.8 1.6 0.2] Actual-label: 0 predicted-label: 0
sample: [4.8 3. 1.4 0.1] Actual-label: 0 predicted-label: 0
sample: [5.4 3.9 1.7 0.4] Actual-label: 0 predicted-label: 0
sample: [5.3 3.7 1.5 0.2] Actual-label: 0 predicted-label: 0
sample: [7.7 2.6 6.9 2.3] Actual-label: 2 predicted-label: 2
sample: [5.1 3.8 1.9 0.4] Actual-label: 0 predicted-label: 0
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sample: [6.7 3.1 4.4 1.4] Actual-label: 1 predicted-label: 1  
sample: [4.3 3.  1.1 0.1] Actual-label: 0 predicted-label: 0  
sample: [6.3 2.9 5.6 1.8] Actual-label: 2 predicted-label: 2  
classification accuracy: 96.66666666666667
```