

```
In [5]: #Attribute selection
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import StandardScaler
from sklearn.neighbors import KNeighborsClassifier
from sklearn.metrics import accuracy_score

from sklearn.datasets import load_iris

data = load_iris()
df = pd.DataFrame(data.data, columns = data.feature_names)
df['target'] = data.target
X = df.drop('target', axis=1)
y = df['target']
```

```
In [16]: X_train,X_test,y_train,y_test = train_test_split(X,y,test_size = 0.3,random_

scaler = StandardScaler()
X_train = scaler.fit_transform(X_train)
X_test = scaler.transform(X_test)

knn_classifier = KNeighborsClassifier(n_neighbors=3)
knn_classifier.fit(X_train,y_train)

y_pred = knn_classifier.predict(X_test)

accuracy = accuracy_score(y_test,y_pred)
print(f"Accuracy of KNN classifier:{accuracy*100:.2f}%")
```

Accuracy of KNN classifier:42.22%

C:\ProgramData\anaconda3\Lib\site-packages\sklearn\base.py:464: UserWarning: X does not have valid feature names, but KNeighborsClassifier was fitted with feature names  
warnings.warn(

```
In [17]: import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import StandardScaler
from sklearn.neighbors import KNeighborsRegressor
from sklearn.metrics import mean_squared_error

from sklearn.datasets import fetch_california_housing

data = fetch_california_housing()
df = pd.DataFrame(data.data, columns=data.feature_names)
df['target'] = data.target
```

```
In [20]: X_train,X_test,y_train,y_test = train_test_split(X,y,test_size = 0.3,random_

scaler = StandardScaler()
X_train = scaler.fit_transform(X_train)
X_test = scaler.transform(X_test)

knn_classifier = KNeighborsClassifier(n_neighbors=5)
knn_classifier.fit(X_train,y_train)

y_pred = knn_classifier.predict(X_test)

mse = mean_squared_error(y_test,y_pred)
print(f"Mean Squared Error of KNN regressor:{mse:.2f}")
```

Mean Squared Error of KNN regressor:1.38

C:\ProgramData\anaconda3\Lib\site-packages\sklearn\base.py:464: UserWarning: X does not have valid feature names, but KNeighborsClassifier was fitted with feature names  
warnings.warn(

In [ ]: