**KNN classifier (week-3)**

import sklearn

import pandas as pd

from sklearn.datasets import load\_iris

from sklearn.neighbors import KNeighborsClassifier

iris=load\_iris()

x = iris.data

y = iris.target

print ('sepal-length', 'sepal-width', 'petal-length', 'petal-width')

print(x)

print('class: 0-Iris-Setosa, 1- Iris-Versicolour, 2- Iris-Virginica')

print(y)

from sklearn.model\_selection import train\_test\_split

x\_train, x\_test, y\_train, y\_test = train\_test\_split(x, y, test\_size=0.33, random\_state=42)

knn=KNeighborsClassifier(n\_neighbors=3)

knn.fit(x\_train,y\_train)

from sklearn.metrics import confusion\_matrix

from sklearn.metrics import accuracy\_score

from sklearn.metrics import classification\_report

y\_pred=knn.predict(x\_test)

cm=confusion\_matrix(y\_test,y\_pred)

print("confusion\_matrix\n",cm)

print(" correct predicition",accuracy\_score(y\_test,y\_pred))

print(" worng predicition",(1-accuracy\_score(y\_test,y\_pred)))

Output:

confusion\_matrix

[[19 0 0]

[ 0 15 0]

[ 0 1 15]]

correct predicition 0.98

worng predicition 0.020000000000000018