**Experiment No.: 4**

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**Roll No:3**

**Batch:Rmca-B**

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**Aim**

Perform Z-score normalization, Min-max normalization using iris dataset

from sklearn.datasets import load\_iris

from sklearn.preprocessing import MinMaxScaler

import numpy as np

X, y = load\_iris(return\_X\_y=True)

print(X.shape)

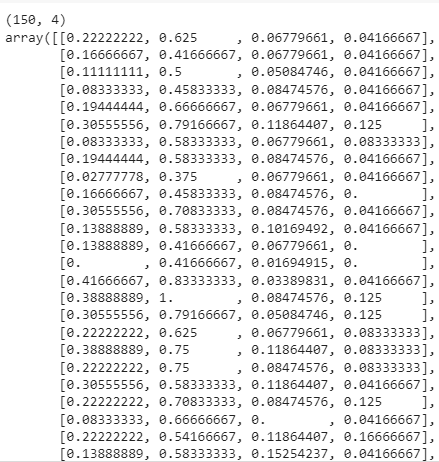
scaler = MinMaxScaler()

scaler.fit(X)

X\_scaled = scaler.transform(X)

X\_scaled

**Output**



import matplotlib.pyplot as plt

fig, axes = plt.subplots(1,2)

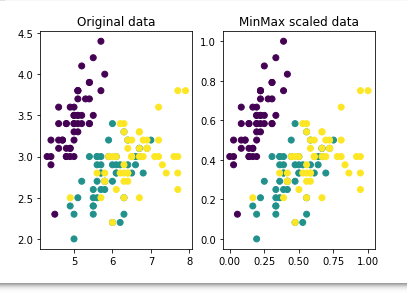
axes[0].scatter(X[:,0], X[:,1], c=y)

axes[0].set\_title("Original data")

axes[1].scatter(X\_scaled[:,0], X\_scaled[:,1], c=y)

axes[1].set\_title("MinMax scaled data")

plt.show()



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

X\_train, X\_test, y\_train, y\_test = train\_test\_split(

    X, y, test\_size=0.2, random\_state=42, stratify = y)

from sklearn.neighbors import KNeighborsClassifier

model=KNeighborsClassifier(n\_neighbors=5,metric='minkowski')

model.fit(X\_train, y\_train)

y\_pred=model.predict(X\_test)

model.score(X\_test, y\_test)

