import tensorflow as tf

from tensorflow.keras.datasets import boston\_housing

from sklearn import preprocessing

(train\_x, train\_y),(test\_x, test\_y)=boston\_housing.load\_data()

print(

  "       Train Shape :", train\_x.shape,

  "\n        Test Shape :", test\_x.shape,

  "\nActual Train Shape :", train\_y.shape,

  "\nActual  Test Shape :", test\_y.shape

)

print(train\_x[0], train\_y[0], sep="\n")

train\_x=preprocessing.normalize(train\_x)

test\_x=preprocessing.normalize(test\_x)

print(train\_x[0], train\_y[0], sep="\n")

from tensorflow.keras.models import Sequential

from tensorflow.keras.layers import \*

model = Sequential([

  Dense(128, activation='relu', input\_shape=(train\_x[0].shape)),

  Dense(64, activation='relu'),

  Dense(32, activation='relu'),

  Dense(1)

])

model.compile(

  optimizer='rmsprop',

  loss='mse',

  metrics=['mae']

)

history = model.fit(

  x=train\_x, y=train\_y,

  epochs=100, batch\_size=1,

  verbose=1,

  validation\_data=(test\_x, test\_y)

)

test\_input=[[

  8.65407330e-05,

  0.00000000e+00,

  1.13392175e-02,

  0.00000000e-00,

  1.12518247e-03,

  1.31897603e-02,

  7.53763011e-02,

  1.30768051e-02,

  1.09241016e-02,

  4.89399752e-01,

  4.41333705e-02,

  8.67155186e-01,

  1.75004108e-02

]]

print(

  "Actual Output : 21.1",

  "\nPredicted output :", model.predict(test\_input)

)