

CI ASSIGNMENT - 3

IMPLEMENTING OF NEURO FUZZY REFERENCE SYSTEM USING PYTHON

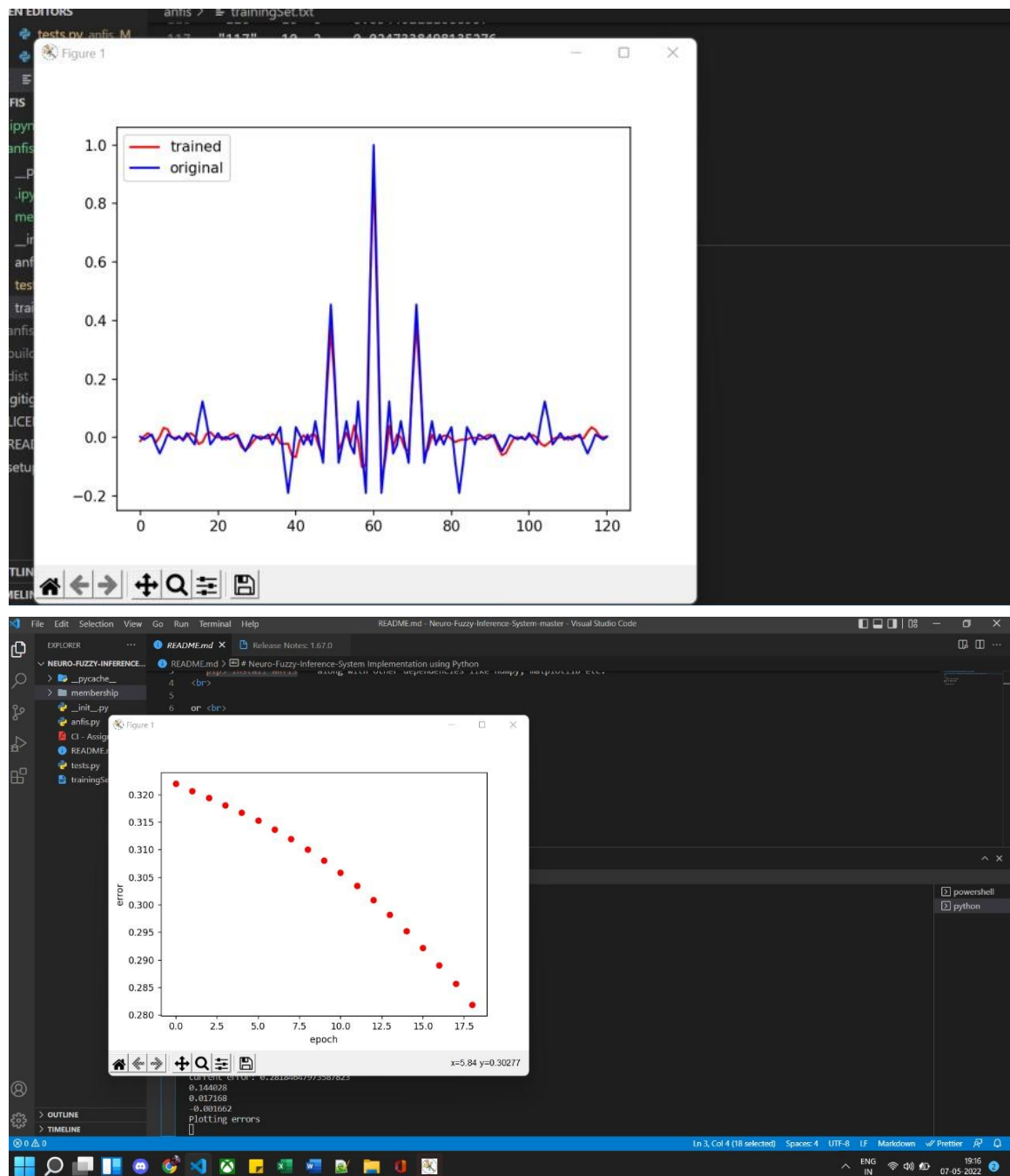
AIM:

To implementing of neuro fuzzy reference system using python.

TEST CODE:

```
tests.py x Release Notes: 1.67.0
tests.py > ...
1 import sys
2 import anfis
3 import numpy
4 import membership.mfDerivs
5 import membership.membershipfunction
6
7
8 # numpy.loadtxt('c:\\python_fiddling\\myProject\\MF\\trainingSet.txt', usecols=[1,2,3])
9 ts = numpy.loadtxt("trainingSet.txt", usecols=[1, 2, 3])
10 X = ts[:, 0:2]
11 Y = ts[:, 2]
12
13 mf = [[['gaussmf', {'mean': 0., 'sigma': 1.}], ['gaussmf', {'mean': -1., 'sigma': 2.}], ['gaussmf', {'mean': -4., 'sigma': 10.}], ['gaussmf', {'mean':
14 | ['gaussmf', {'mean': 1., 'sigma': 2.}], ['gaussmf', {'mean': 2., 'sigma': 3.}], ['gaussmf', {'mean': -2., 'sigma': 10.}], ['gaussmf', {'mean'
15
16
17 mfc = membership.membershipfunction.MemFuncs(mf)
18 anf = anfis.ANFIS(X, Y, mfc)
19 anf.trainHybridJangoOffline(epochs=20)
20 print(round(anf.consequents[-1][0], 6))
21 print(round(anf.consequents[-2][0], 6))
22 print(round(anf.fittedValues[9][0], 6))
23 if round(anf.consequents[-1][0], 6) == -5.275538 and round(anf.consequents[-2][0], 6) == -1.998703 and round(anf.fittedValues[9][0], 6) == 0.002249:
24 | print("test is good")
25
26 print("Plotting errors")
27 anf.plotErrors()
28 print("Plotting results")
29 anf.plotResults()
30
```

OUTPUT:



RESULT:

Thus the Neuro Fuzzy Inference System has been implemented using Python.