Name: Krishnaprasad Awala

Roll No: D2215004

Enrolment No: MITU21BTITD006

Class: TY-IT CORE 2

LAB ASSIGNMENT NO 1

import numpy as np import pandas as pd

def sigmoid(x):

return 1 / (np.exp(-x) + 1)

train\_data = np.array([[0,0,1],[1,1,1],[1,0,1],[0,1,1]]) train\_output = np.array([[0,1,1,0]]).T

train\_output

array([[0],

[1],

[1],

[0]])

train\_output.size 4

train\_output.ndim 2

#generate weights

#model a single neuro with 3 input connections and 1 output connection #we asssign random wights

np.random.seed(1)

weights = 2 \* np.random.random((3,1)) -1 weights

array([[-0.16595599],

[ 0.44064899],

[-0.99977125]])

for i in range(1000):

output = sigmoid(np.dot(train\_data,weights))

def SCG(x):

return x \* (1-x)

output.shape

(4, 1)

https://colab.research.google.com/drive/1nLrRW-ZL-cli-T xH\_cp0jBjNdDm1Ig#scrollTo=fjPq0dBMngmO&printMode=true 1/2