% Filename: cra.m

clc

clear all

close all

I=xlsread('Credit\_Risk\_Analysis.xlsx');

% inputs

p1=I(:,1); % all rows in the first column

p2=I(:,2);

p3=I(:,3);

p4=I(:,4);

p5=I(:,5);

p6=I(:,6);

p7=I(:,7);

p8=I(:,8);

p9=I(:,9);

p10=I(:,10);

p11=I(:,11);

p12=I(:,12);

p13=I(:,13);

p14=I(:,14);

% output

p15=I(:,15);

I=[p1 p2 p3 p4 p5 p6 p7 p8 p9 p10 p11 p12 p13 p14]; % Input data sets

I1=I'; %input

I2=I1(:,1:2:5000); %training input data sets

I3=I1(:,2:2:5000); %testing input data sets

Out=[p2];

Out1=Out';

t=zscore(Out1); %final normalised output

%mu =mean(t); %use when testing with trainbr

%sig=std(t);

O1=t(:,1:2: 5000); %training output

O2=t(:,2:2: 5000); %testing output

net=newff(minmax(I1),[30,35,1],{ 'tansig', 'logsig', 'purelin'},'trainlm');

net.trainParam.show=1000;

net.trainParam.lr=1.0;

net.trainParam.mc=0.5;

net.trainParam.epochs=1000;

net.trainParam.goal=1e-9;

[net,tr]=train(net,I2,O1);

view(net);

% Test the network

y1=sim(net,I2)

y2=sim(net,I3)

% figure(1)

% plot(y1,O1,'b\*') %training data graph

% title('Graph for training data');

% figure(2)

% plot(y2,O2,'b\*') % testing data graph

% title('Graph for testing data');