МИНИСТЕРСТВО ОБРАЗОВАНИЯ РЕСПУБЛИКИ БЕЛАРУСЬ

УЧРЕЖДЕНИЕ ОБРАЗОВАНИЯ

“БРЕСТСКИЙ ГОСУДАРСТВЕННЫЙ ТЕХНИЧЕСКИЙ УНИВЕРСИТЕТ”

**ИНТЕЛЕКТУАЛЬНЫЕ ИНФОРМАЦИОННЫЕ ТЕХНОЛОГИИ**

ОТЧЁТ

По лабораторной работе № 3

Выполнил:

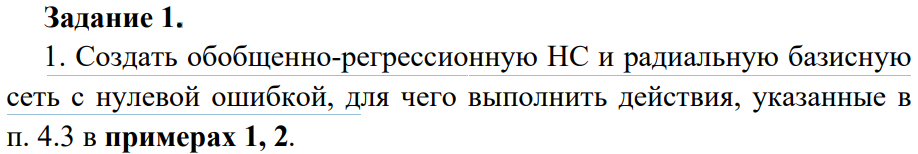
Студент группы ИИ-22

Копанчук Евгений Романович

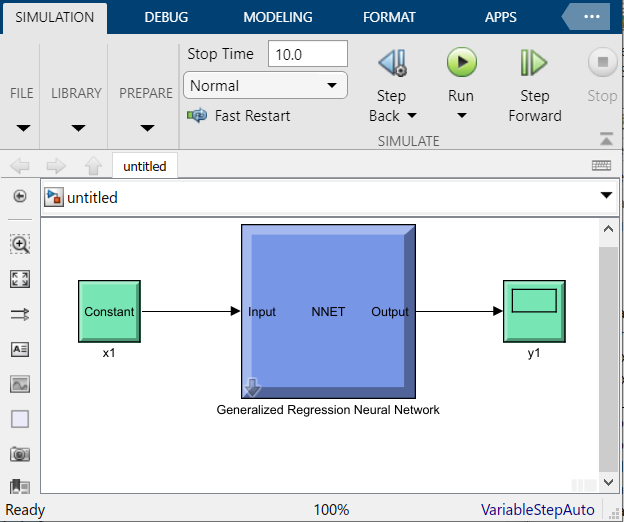
Проверил:

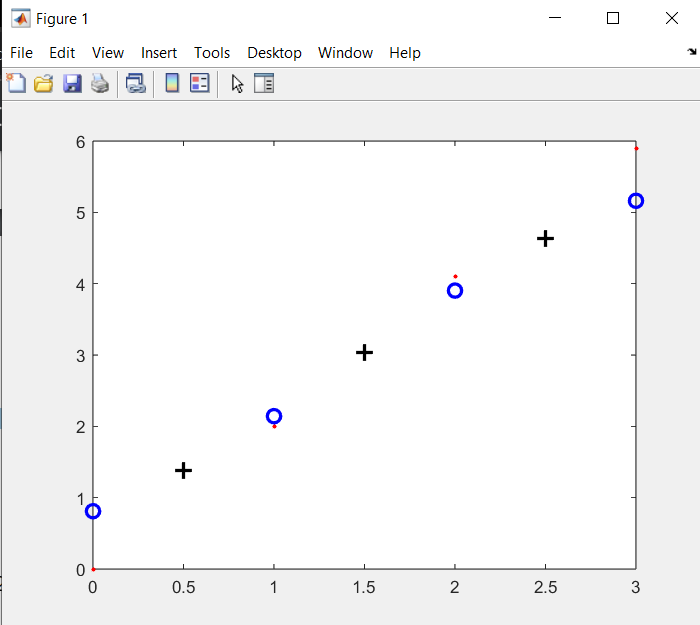
Рыжов А. С.

Брест – 2023

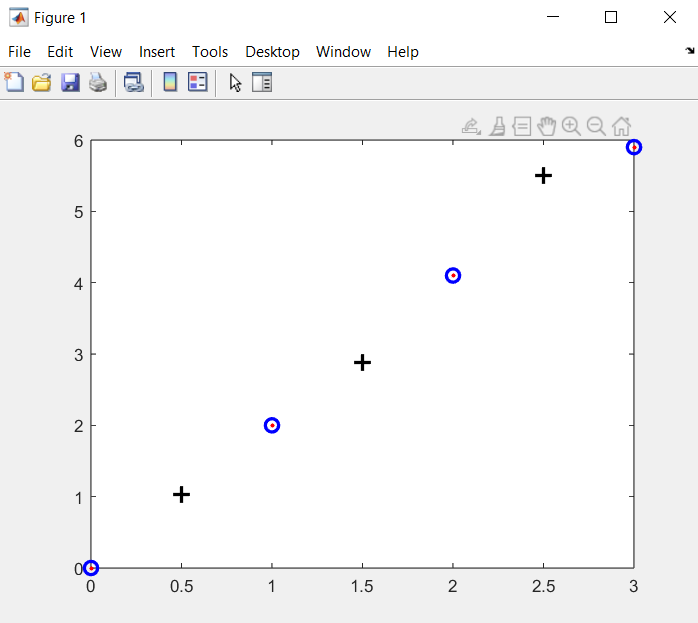
**Ход работы**

|  |  |
| --- | --- |
| >> P = 0:3;  T = [0.0 2.0 4.1 5.9];  net = newgrnn(P,T);  gensim(net)  ans =  'untitled'  >> plot(P,T,'\*r','MarkerSize',2,'LineWidth',2)  hold on  >> V = sim(net,P);  >> plot(P,V,'ob','MarkerSize',8, 'LineWidth',2)  >> P1 = 0.5:2.5;  Y = sim(net,P1);  plot(P1,Y,'+k','MarkerSize',10,'LineWidth',2)  >> Y = sim(net, 0:0.5:3)  Y = 0.8104 1.3759 2.1424 3.0300 3.9030 4.6345 5.1615  Y =  Columns 1 through 5  0.8104 1.3759 2.1424 3.0300 3.9030  Columns 6 through 7  4.6345 5.1615  >> net = newgrnn(P,T,0.1);  Y = sim(net, 0:0.5:3)  Y =  Columns 1 through 5  0.0000 1.0000 2.0000 3.0500 4.1000  Columns 6 through 7  5.0000 5.9000  >> |  |

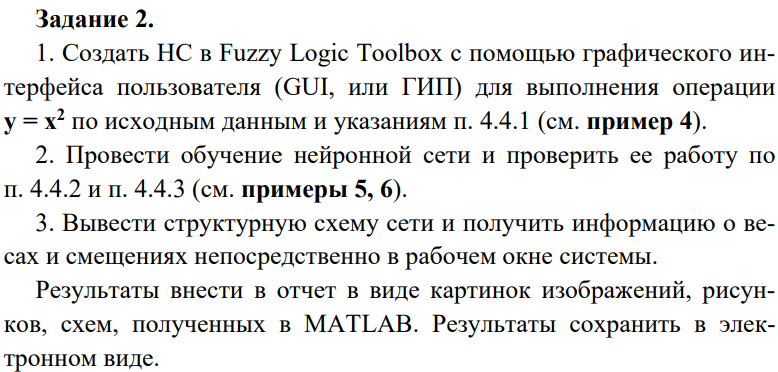




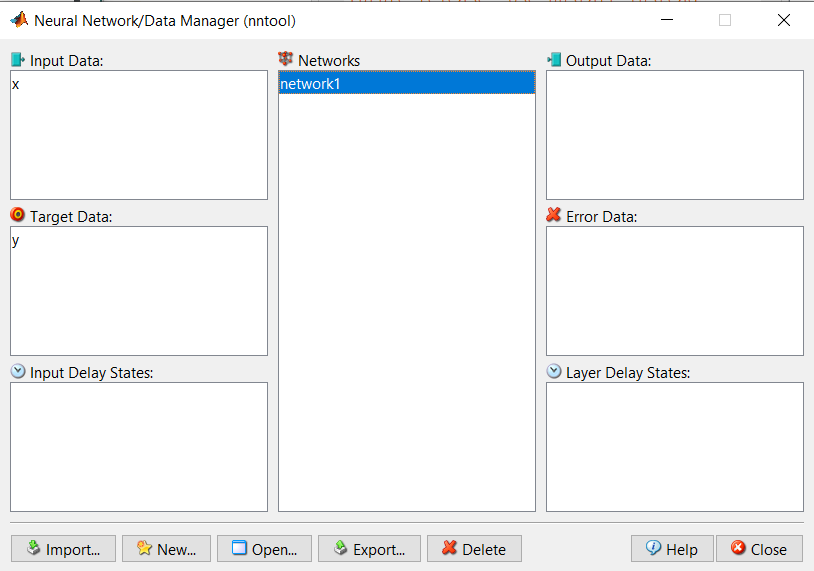
|  |  |
| --- | --- |
| >> P = 0:3;  T = [0.0 2.0 4.1 5.9];  net = newrbe(P,T);net.layers{1}.size  ans =  4  >> plot(P,T,'\*r','MarkerSize',2,'LineWidth',2)  hold on  V = sim(net,P);  >> plot(P,V,'ob','MarkerSize',8, 'LineWidth',2)  P1 = 0.5:2.5;  Y = sim(net,P1)  plot(P1,Y,'+k','MarkerSize',10, 'LineWidth',2)  Y = sim(net, 0:0.5:3)  Y =  1.0346 2.8817 5.5053  Y =  Columns 1 through 4  0.0000 1.0346 2.0000 2.8817  Columns 5 through 7  4.1000 5.5053 5.9000h  >> |  |

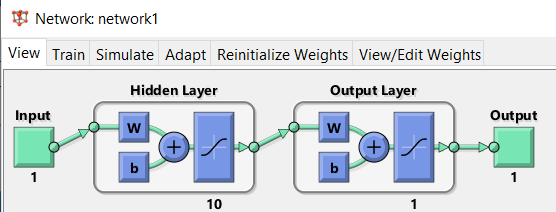


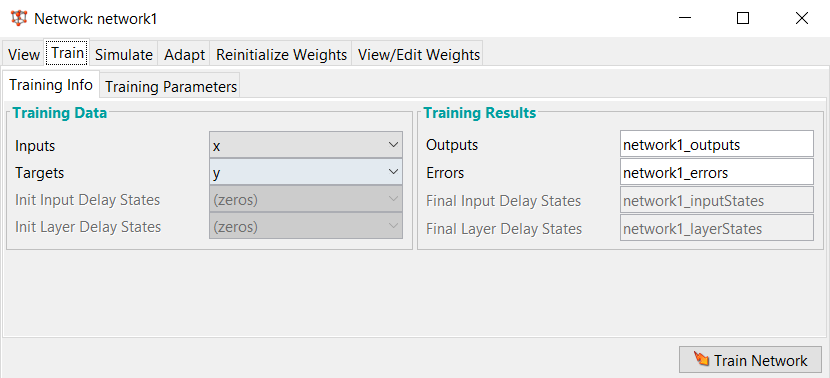
|  |  |
| --- | --- |
| >> x = [-1 -0.8 -0.5 -0.2 0 0.1 0.3 0.6 0.9 1];  >> y = [1 0.64 0.25 0.04 0 0.01 0.09 0.36 0.81 1];  >> a=newgrnn(x,y,0.01);  >> Y1 = sim(a,[-0.9 -0.7 -0.3 0.4 0.8])  Y1 =  Columns 1 through 4  0.8200 0.6400 0.0400 0.0900  Column 5  0.8100  >> a=newrbe(x,y);  >> Yl = sim(a,[-0.9 -0.7 -0.3 0.4 0.8])  Yl =  Columns 1 through 4  0.8100 0.4900 0.0900 0.1600  Column 5  0.6400  >> |  |

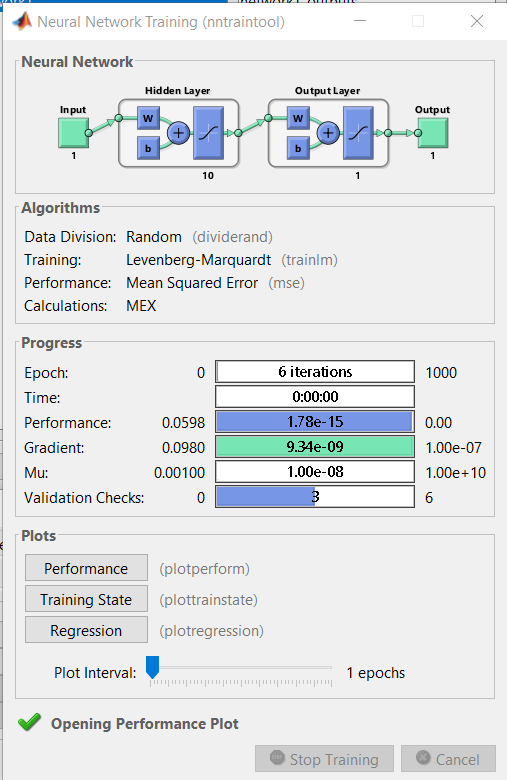


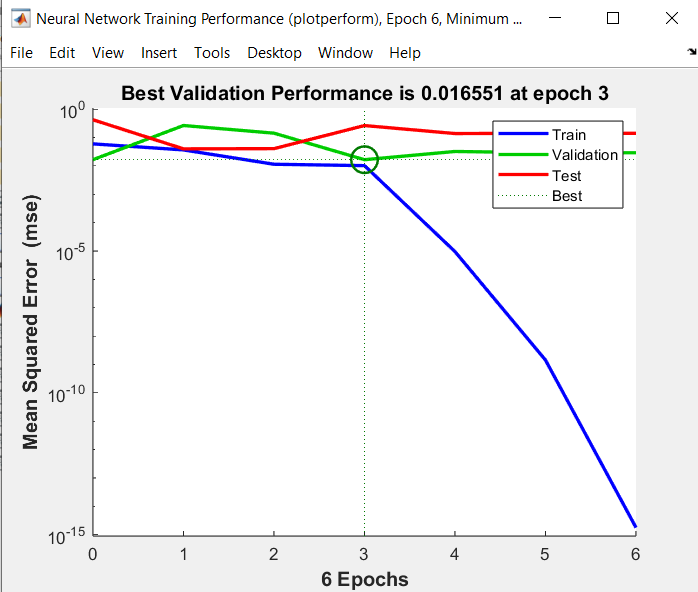
|  |  |
| --- | --- |
| >> х = [-1 -0.8 -0.5 -0.2 0 0.1 0.3 0.6 0.9 1];  >> у = [1 0.64 0.25 0.04 0 0.01 0.09 0.36 0.81 1]; >> nntool |  |

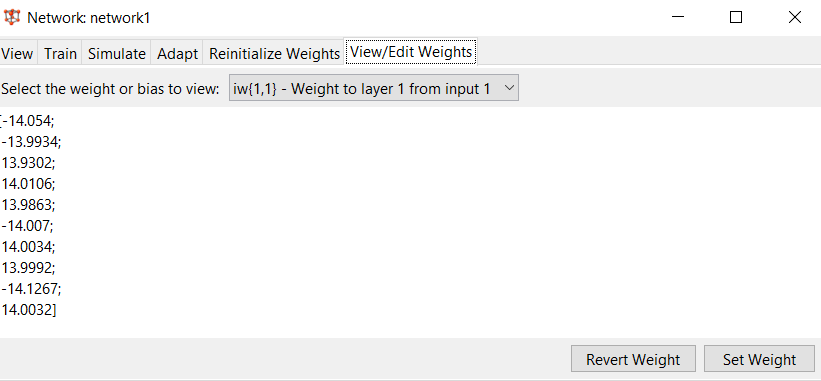




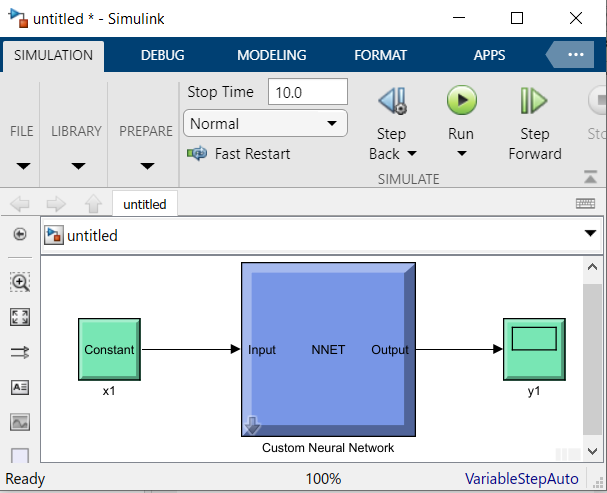


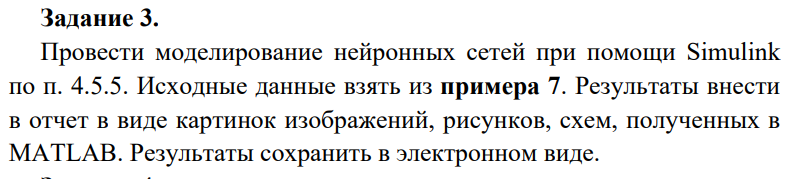






|  |  |
| --- | --- |
| >> network1.IW{1,1},network1.b{1}  ans =  14  -14  -14  -14  14  -14  14  -14  14  -14  ans =  -14.0000  10.8889  7.7778  4.6667  -1.5556  -1.5556  4.6667  -7.7778  10.8889  -14.0000  >> network1.IW{2,1},network1.b{2}  ans =  []  ans =  0  >> gensim(network1)  ans =  'untitled'  >> |  |





|  |  |
| --- | --- |
| >> p = [1 2 3 4 5];  >> t = [1 3 5 7 9];  >> net = newlind(p,t);  >> Y = sim(net,p)  Y =  Columns 1 through 4  1.0000 3.0000 5.0000 7.0000  Column 5  9.0000  >> gensim(net,-1)  ans =  'untitled'  >> |  |

