

Example 1: Pattern Classification, Batch Training.

Contents

- Construct the data (note the last row of ones)
- Solve for the weight matrix W directly using the slash command
- Graphics commands to view the results:

Construct the data (note the last row of ones)

```
X=[2 1 -2 -1;2 -2 2 1];
X(3,:)=ones(1,4);
Y=[-1 1 -1 1];
```

Solve for the weight matrix W directly using the slash command

```
W=Y/X;
```

Graphics commands to view the results:

```
% Window size for graphics
x1=-3;x2=3;y1=-3;y2=3;
t=linspace(x1,x2); %This is the domain for the separating line below

% Seperating line is ax+by+c=0
y=-(W(1)/W(2))*t-(W(3)/W(2));
plot(X(1,[1,3]),X(2,[1,3]), '^',X(1,[2,4]),X(2,[2,4]), 'x'); %Original data
hold on
plot(t,y);
axis([x1 x2 y1 y2]);
```

