

Example 2: Pattern Classification, Batch Training.

Contents

- Set up the data (Y is actually the target matrix).
- Solve for the weights and biases.
- Plotting routines:

Set up the data (Y is actually the target matrix).

```
N=100; %Number of points
X1=0.8*randn(2,N)+repmat([2;2],1,N);
X2=1.5*randn(2,N)+repmat([1;-2],1,N);
X=[X1 X2];
X(3,:)=ones(1,2*N);

Y=[repmat([1;0],1,N) repmat([0;1],1,N)];
```

Solve for the weights and biases.

```
C=Y/X;
```

Plotting routines:

```
plot(X1(1,:),X1(2,:), 'o', X2(1,:),X2(2,:), 'x');
hold on
n1=min(X(1,:));n2=max(X(1,:));
t=linspace(n1,n2);
L1=(-C(1,1)*t+(-C(1,3)+0.5))./C(1,2);
L2=(-C(2,1)*t+(-C(2,3)+0.5))./C(2,2);
plot(t,L1,t,L2);
```

