Breast Cancer Linear Neural Network Batch Training

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```matlab
%Load Data
BreastData
X = double(X)';
%Preprocess data
m = mean(X, 2);
s = std(X,0,2);
Xm = (X -m) ./repmat(s,1,106);

% Construct Xhat and calculate What
b = ones(1,106);
Xhat = [Xm
    b];

What = T/Xhat;

% Find W and b
W = What(:,1:9);
b = What(:,10);

plotconfusion(T, (W*Xm + b));
```

Confusion Matrix

	1	2	3	4	5	6	
1	**21** 19.8%	**2** 1.9%	**5** 4.7%	**1** 0.9%	**0** 0.0%	**0** 0.0%	72.4% 27.6%
2	**0** 0.0%	**10** 9.4%	**7** 6.6%	**2** 1.9%	**0** 0.0%	**0** 0.0%	52.6% 47.4%
3	**0** 0.0%	**1** 0.9%	**1** 0.9%	**0** 0.0%	**0** 0.0%	**0** 0.0%	50.0% 50.0%
4	**0** 0.0%	**2** 1.9%	**5** 4.7%	**13** 12.3%	**0** 0.0%	**0** 0.0%	65.0% 35.0%
5	**0** 0.0%	**0** 0.0%	**0** 0.0%	**0** 0.0%	**12** 11.3%	**1** 0.9%	92.3% 7.7%
6	**0** 0.0%	**0** 0.0%	**0** 0.0%	**0** 0.0%	**2** 1.9%	**21** 19.8%	91.3% 8.7%
	100% 0.0%	66.7% 33.3%	5.6% 94.4%	81.2% 18.8%	85.7% 14.3%	95.5% 4.5%	**73.6%** **26.4%**

Output Class (rows), Target Class (columns: 1, 2, 3, 4, 5, 6)

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