

```
clear; close all;
ls_classify_data;

% Least squares to find w and v
Xtilda= [X' ones(N,1)];
z = (Xtilda'*Xtilda)\Xtilda'*y;

w = z(1:n,1)
v = z(4,1)

% Prediction Results
yhat = sign(w'*Xtest+v)';
correct = sum(yhat == ytest);

false_pos = sum((yhat == 1) & (ytest == -1));
false_neg = sum((yhat == -1) & (ytest == 1));

disp(['The number of correct predictions is ' num2str(correct)]);
disp(['The number of false positives is ' num2str(false_pos)]);
disp(['The number of false negatives is ' num2str(false_neg)]);
```

w =

0.0776
0.0172
0.0529

v =

-2.2792

The number of correct predictions is 92
The number of false positives is 6
The number of false negatives is 2

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