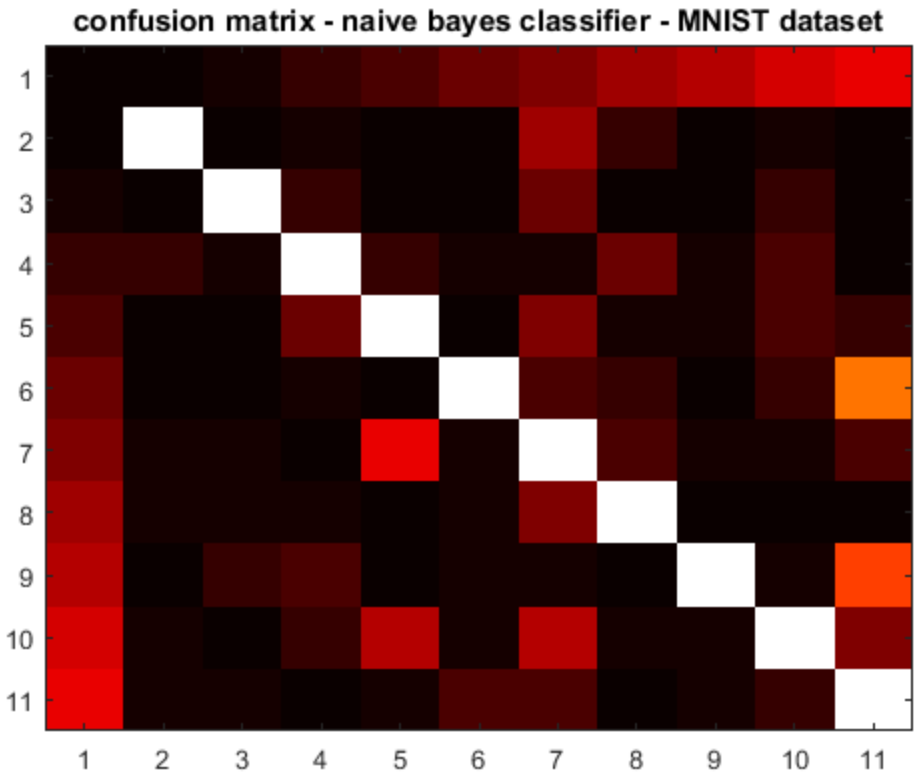
```
% With the  MNIST Data
[M_means, M_variances] =
 f1_train_naive_bayes_classifier( M_data_train, M_labels_train );

% Test the predictions on the test data for the MNIST dataset
[M_labels_prediction, M_confusion_matrix, M_accuracy] =
 f2_predict_naive_bayes_classifier( M_means, M_variances, M_data_test,
 M_labels_test, 0.084);

% Display the confusion matrix and the accuracy
M_confusion_matrix
M_accuracy

% Display the confusion matrix through an image
figure();
colormap hot;
image(M_confusion_matrix*2.5);
title('confusion matrix - naive bayes classifier - MNIST dataset')
```

M_confusion_matrix =

NaN	0	1	2	3	4	5	6	7	8	9
0	90	0	1	0	0	6	2	0	1	0
1	0	91	2	0	0	4	0	0	2	0
2	2	1	84	2	1	1	4	1	3	0
3	0	0	4	83	0	5	1	1	3	2
4	0	0	1	0	77	3	2	0	2	14
5	1	1	0	9	1	80	3	1	1	3
6	1	1	1	0	1	5	91	0	0	0
7	0	2	3	0	1	1	0	79	1	12
8	1	0	2	7	1	7	1	1	75	5
9	1	1	0	1	3	3	0	1	2	88

M_accuracy =

0.8408



Published with MATLAB® R2015b