Problem 4(a): See Code in bayes_lm2221.py
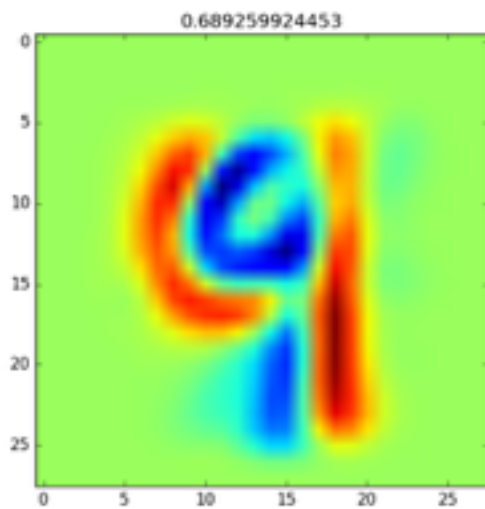
Part 4(b): Confusion Matrix

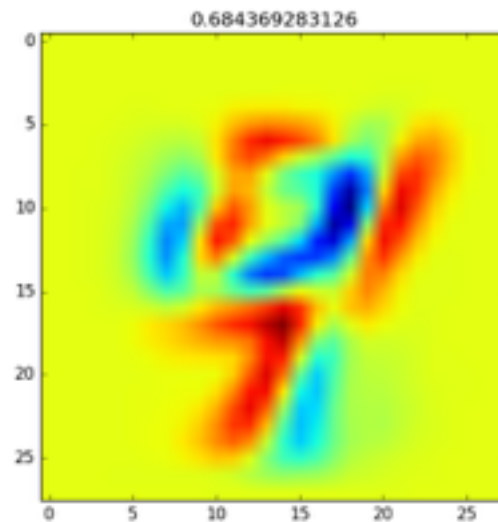|	Predict class 4	Predict class 9
True Class 4	832	150
True Class 9	143	866

Accuracy: 0.852837769965

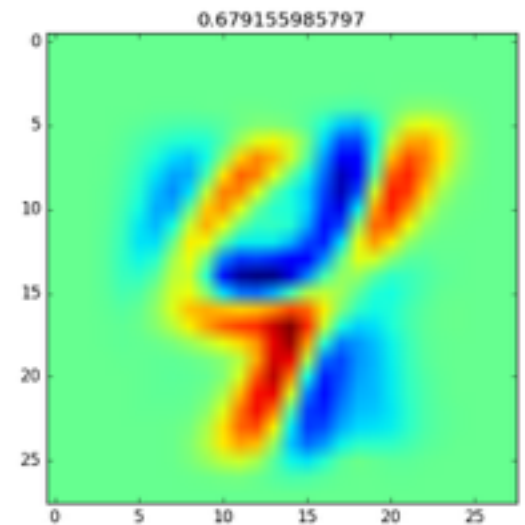**Part 4(c): Misclassified Examples**

Predicted to be a 9, True class is 4
Probability of 0.689259924453.

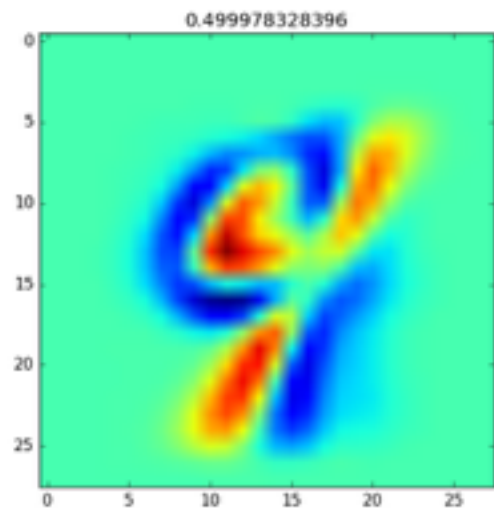Predicted to be a 9, True class is 4
Probability of 0.684369283126.

Predicted to be a 9, True class is 4
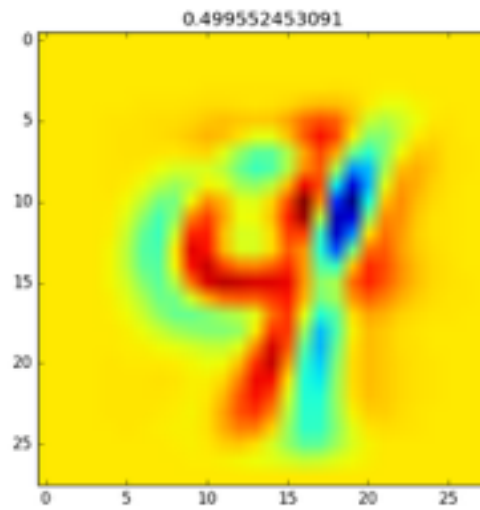Probability of 0.679155985797.

0.689259924453

0.684369283126

0.679155985797

Part 4(d): Ambiguous Examples

Predicted to be a 4, True class is 4
Probability of 0.499978328396.

Predicted to be a 4, True class is 4
Probability of 0.499552453091.

Predicted to be a 4, True class is 9
Probability of 0.499503559611.

0.499978328396

0.499552453091

0.499503559611