|  |  |  |
| --- | --- | --- |
| **Gamma** | **F (+)** | **T (+)** |
| 0.1 | 0.037 | 0.99 |
| 0.3 | 0.043 | 0.99 |
| 0.5 | 0.043 | 0.99 |
| 0.7 | 0.043 | 0.99 |
| 0.9 | 0.043 | 0.99 |
| 1 | 0.043 | 0.99 |
| 2 | 0.107 | 0.99333 |
| 3 | 0.540 | 0.99667 |
| 4 | 0.727 | 0.99667 |
| 5 | 0.817 | 0.99667 |
| 6 | 0.873 | 0.99667 |
| 7 | 0.910 | 0.99667 |
| 8 | 0.930 | 0.99667 |
| 9 | 0.937 | 1 |
| 10 | 0.957 | 1 |
| 20 | 0.990 | 1 |
| 30 | 0.993 | 1 |
| 40 | 0.997 | 1 |
| 50 | 1.000 | 1 |

Sarah Gibbons

Machine Learning—Assignment 3

11/28/17

* 1. Linear Accuracy = 97.7% (586 correct, 14 incorrect, 600 total)
  2. Polynomial Accuracy = 97.33% (584 correct, 16 incorrect, 600 total)
  3. Radial basis function Accuracy =  97.7% (586 correct, 14 incorrect, 600 total)

Fold 1: Accuracy on test set: 96.25% (386 correct, 15 incorrect, 400 total)

Fold 2: Accuracy on test set: 96.50% (386 correct, 14 incorrect, 400 total)

Fold 3: Accuracy on test set: 96.25% (385 correct, 15 incorrect, 400 total)

Fold 4: Accuracy on test set: 97.50% (390 correct, 10 incorrect, 400 total)

Fold 5: Accuracy on test set: 98.00% (392 correct, 8 incorrect, 400 total)

Average 96.9

1. The best gamma based on the ROC Curve graphed below will be 0.99 (0.1) (the point closest to the left of the graph)

false positive