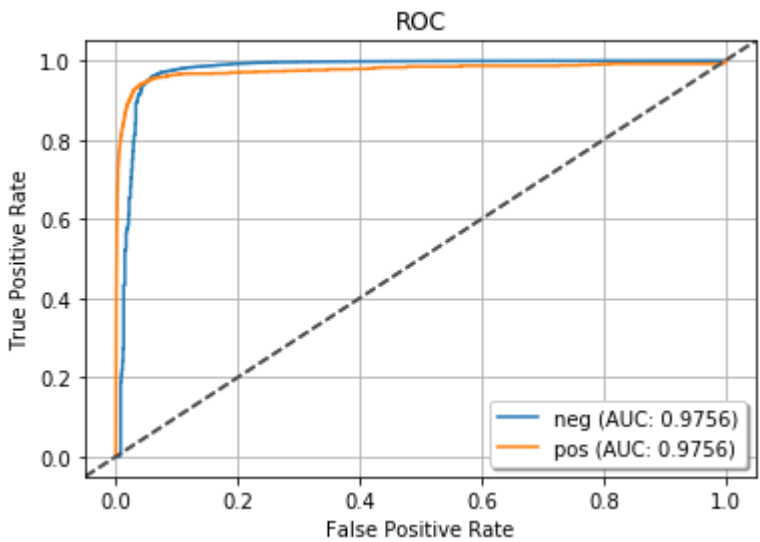


In [3]: runfile('C:/Users/amcle/Dropbox/INF_552/3_HW/Problem 2/weka_tree.py', wdir='C:/Users/amcle/Dropbox/INF_552/3_HW/Problem 2')

LMT (imbalanced classes) CV = 5 Error: 0.82%

==== Confusion Matrix ====

```
a  b  <-- classified as
58839 161 |  a = neg
330  670 |  b = pos
```



| | | |
|----------------------------------|-----------|-----------|
| Correctly Classified Instances | 59509 | 99.1817 % |
| Incorrectly Classified Instances | 491 | 0.8183 % |
| Kappa statistic | 0.7277 | |
| Mean absolute error | 0.0114 | |
| Root mean squared error | 0.0821 | |
| Relative absolute error | 34.7046 % | |
| Root relative squared error | 64.1664 % | |
| Total Number of Instances | 60000 | |

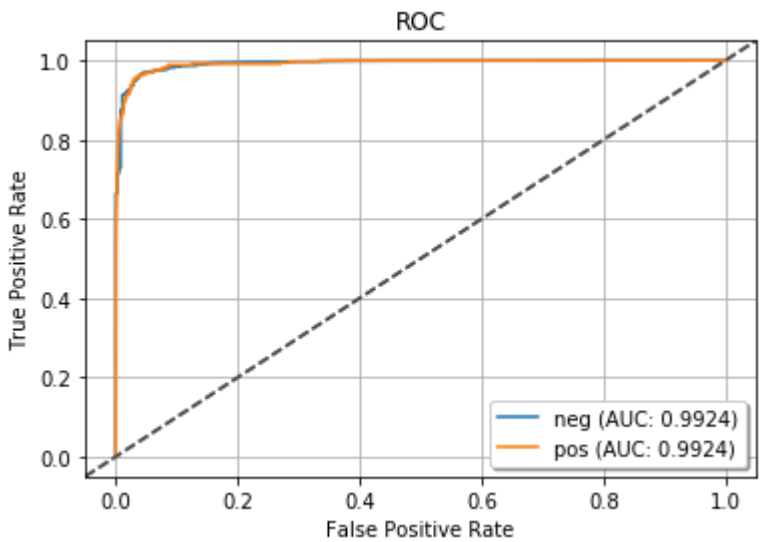
==== Detailed Accuracy By Class ====

| | TP Rate | FP Rate | Precision | Recall | F-Measure | MCC | ROC Area | PRC Area | Class |
|---------------|---------|---------|-----------|--------|-----------|-------|----------|----------|-------|
| | 0.997 | 0.330 | 0.994 | 0.997 | 0.996 | 0.731 | 0.976 | 0.999 | neg |
| | 0.670 | 0.003 | 0.806 | 0.670 | 0.732 | 0.731 | 0.976 | 0.749 | pos |
| Weighted Avg. | 0.992 | 0.325 | 0.991 | 0.992 | 0.991 | 0.731 | 0.976 | 0.994 | |

LMT (imbalanced classes) Test Error: 0.94%

==== Confusion Matrix ====

```
a  b  <-- classified as
15595  30 |  a = neg
120  255 |  b = pos
```



| | | |
|----------------------------------|-----------|-----------|
| Correctly Classified Instances | 15850 | 99.0625 % |
| Incorrectly Classified Instances | 150 | 0.9375 % |
| Kappa statistic | 0.768 | |
| Mean absolute error | 0.0127 | |
| Root mean squared error | 0.0844 | |
| Relative absolute error | 27.7601 % | |
| Root relative squared error | 55.7921 % | |
| Total Number of Instances | 16000 | |

==== Detailed Accuracy By Class ====

| | TP Rate | FP Rate | Precision | Recall | F-Measure | MCC | ROC Area | PRC Area | Class |
|---------------|---------|---------|-----------|--------|-----------|-------|----------|----------|-------|
| | 0.998 | 0.320 | 0.992 | 0.998 | 0.995 | 0.776 | 0.992 | 1.000 | neg |
| | 0.680 | 0.002 | 0.895 | 0.680 | 0.773 | 0.776 | 0.992 | 0.850 | pos |
| Weighted Avg. | 0.991 | 0.313 | 0.990 | 0.991 | 0.990 | 0.776 | 0.992 | 0.996 | |

In [4]: