NAÏVE BAYES CLASSIFIER

Time taken to build model: 0.17 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 3808 38.2214 %

Incorrectly Classified Instances 6155 61.7786 %

Kappa statistic 0.0808

Mean absolute error 0.4138

Root mean squared error 0.5726

Relative absolute error 93.2147 %

Root relative squared error 121.5506 %

Total Number of Instances 9963

=== Detailed Accuracy By Class ===

TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class

0.204 0.133 0.422 0.204 0.275 0.092 0.571 0.376 Joey

0.722 0.634 0.351 0.722 0.472 0.088 0.572 0.377 Chandler

0.236 0.152 0.463 0.236 0.313 0.105 0.586 0.427 Rachel

WAvg. 0.382 0.301 0.414 0.382 0.352 0.095 0.577 0.395

=== Confusion Matrix ===

a b c <-- classified as

656 2036 516 | a = Joey

433 2313 456 | b = Chandler

466 2248 839 | c = Rachel

RANDOM FOREST

Time taken to build model: 7.64 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 4393 44.0931 %

Incorrectly Classified Instances 5570 55.9069 %

Kappa statistic 0.1584

Mean absolute error 0.4216

Root mean squared error 0.4575

Relative absolute error 94.9811 %

Root relative squared error 97.112 %

Total Number of Instances 9963

=== Detailed Accuracy By Class ===

TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class

0.381 0.239 0.431 0.381 0.404 0.147 0.622 0.442 Joey

0.424 0.261 0.434 0.424 0.429 0.163 0.637 0.461 Chandler

0.510 0.341 0.453 0.510 0.480 0.166 0.632 0.511 Rachel

WAvg. 0.441 0.283 0.440 0.441 0.439 0.159 0.631 0.473

=== Confusion Matrix ===

a b c <-- classified as

1223 844 1141 | a = Joey

801 1357 1044 | b = Chandler

816 924 1813 | c = Rachel

Support vector machine classifier

Time taken to build model: 5.06 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 4411 44.2738 %

Incorrectly Classified Instances 5552 55.7262 %

Kappa statistic 0.16

Mean absolute error 0.3983

Root mean squared error 0.4997

Relative absolute error 89.716 %

Root relative squared error 106.058 %

Total Number of Instances 9963

=== Detailed Accuracy By Class ===

TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class

0.318 0.179 0.457 0.318 0.375 0.155 0.598 0.386 Joey

0.457 0.296 0.423 0.457 0.439 0.158 0.604 0.383 Chandler

0.543 0.365 0.452 0.543 0.493 0.172 0.604 0.420 Rachel

Weighted Avg. 0.443 0.283 0.444 0.443 0.438 0.162 0.602 0.397

=== Confusion Matrix ===

a b c <-- classified as

1019 1006 1183 | a = Joey

582 1464 1156 | b = Chandler

630 995 1928 | c = Rachel

Time taken to build model: 0.34 seconds

=== Stratified cross-validation ===

=== Summary ===

Correctly Classified Instances 5767 41.2961 %

Incorrectly Classified Instances 8198 58.7039 %

Kappa statistic 0.1436

Mean absolute error 0.3993

Root mean squared error 0.5526

Relative absolute error 94.4315 %

Root relative squared error 120.1681 %

Total Number of Instances 13965

=== Detailed Accuracy By Class ===

TP Rate FP Rate Precision Recall F-Measure MCC ROC Area PRC Area Class

0.554 0.330 0.335 0.554 0.417 0.194 0.648 0.340 Penny

0.415 0.353 0.328 0.415 0.367 0.058 0.557 0.321 Leonard

0.343 0.159 0.661 0.343 0.452 0.213 0.665 0.624 Sheldon

W Avg. 0.413 0.256 0.488 0.413 0.419 0.163 0.629 0.470

=== Confusion Matrix ===

a b c <-- classified as

1785 969 467 | a = Penny

1699 1704 700 | b = Leonard

1847 2516 2278 | c = Sheldons