

|  |                                 |                         |                        |             |                       |                    |             |                              |                      |                        |         |                                      |  |  |
|--|---------------------------------|-------------------------|------------------------|-------------|-----------------------|--------------------|-------------|------------------------------|----------------------|------------------------|---------|--------------------------------------|--|--|
| Note: Doing means folds testing for 20 * 10-fold cross-validation in which the average accuracy for a single 10-fold cross validation acts as a sample |                                 |                         |                        |             |                       |                    |             |                              |                      |                        |         |                                      |  |  |
| Runs   | Link-Target Id Average Accuracy | CoreEx Average Accuracy | Difference in accuracy | Sample mean | Mean squared Distance | Degrees of Freedom | SQRT DF + 1 | Sum of mean squared Distance | Sample std deviation | Calculated Z-statistic | p-value | Z-value from Table (one tailed test) |  |  |
| trial 1  | 93                              | 89.2                    | 3.8                    | 4.93        | 1.2769                | 19                 | 4.472135955 | 22.242                       | 1.081957291          | 20.37754211            | 0.05    | 1.645                                |  |  |
| trial 2  | 93.9                            | 89                      | 4.9                    |             | 0.0009                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 3  | 94.5                            | 88.1                    | 6.4                    |             | 2.1609                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 4  | 94.2                            | 89.8                    | 4.4                    |             | 0.2809                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 5  | 94.2                            | 88.4                    | 5.8                    |             | 0.7569                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 6  | 94.2                            | 90.1                    | 4.1                    |             | 0.6889                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 7  | 93.6                            | 88.1                    | 5.5                    |             | 0.3249                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 8  | 94.5                            | 89.8                    | 4.7                    |             | 0.0529                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 9  | 94.1                            | 90.7                    | 3.4                    |             | 2.3409                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 10   | 93.9                            | 87.8                    | 6.1                    |             | 1.3689                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 11   | 94.2                            | 87.5                    | 6.7                    |             | 3.1329                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 12   | 94.5                            | 88.7                    | 5.8                    |             | 0.7569                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 13   | 94.5                            | 88.7                    | 5.8                    |             | 0.7569                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 14   | 94.7                            | 89.2                    | 5.5                    |             | 0.3249                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 15   | 93.4                            | 89.9                    | 3.5                    |             | 2.0449                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 16   | 94.2                            | 89.5                    | 4.7                    |             | 0.0529                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 17   | 94.5                            | 90.1                    | 4.4                    |             | 0.2809                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 18   | 93.9                            | 90.1                    | 3.8                    |             | 1.2769                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 19   | 94.8                            | 88.7                    | 6.1                    |             | 1.3689                |                    |             |                              |                      |                        |         |                                      |  |  |
| trial 20   | 93.9                            | 90.7                    | 3.2                    |             | 2.9929                |                    |             |                              |                      |                        |         |                                      |  |  |

Since, 20.37754211> 1.645, we can reject the null hypothesis that ink-target identification will not perform better than CoreEx at identifying news articles when using C4.5's default options