

Exercise 1:

Given are the results of a scoring algorithm and the associated *true* classes of 10 observations:

| ID | Actual Class | Score |
|----|--------------|-------|
| 1 | 0 | 0.33 |
| 2 | 0 | 0.27 |
| 3 | 1 | 0.11 |
| 4 | 1 | 0.38 |
| 5 | 1 | 0.17 |
| 6 | 0 | 0.63 |
| 7 | 1 | 0.62 |
| 8 | 1 | 0.33 |
| 9 | 0 | 0.15 |
| 10 | 0 | 0.57 |

- Create a confusion matrix assuming the decision boundary at 0.5.
- Calculate: precision, sensitivity, negative predictive value, specificity, accuracy, error rate and F-measure.
- Draw the ROC curve and interpret it. Feel free to use R for the drawing.
- Calculate the AUC.