

# Classification evaluation measures (Solution)

Lecture 2, Aug 20, 2019

## Exercise #1

Compute Accuracy, Recall, Precision, F1-score, False Positive Rate, and False Negative Rate for a classifier that made the following predictions.

Id	Actual	Predicted
1	+	-
2	+	+
3	-	-
4	+	+
5	+	-
6	+	+
7	-	-
8	-	+
9	+	-
10	+	-

Step 1: Complete the confusion matrix

		Predicted	
		-	+
Actual	-	TN=2	FP=1
class	+	FN=4	TP=3

Step 2: Compute the specific measures

Accuracy	$\frac{TP+TN}{TP+TN+FP+FN}$	$\frac{5}{10}$
Precision	$\frac{TP}{TP+FP}$	$\frac{3}{4}$
Recall	$\frac{TP}{TP+FN}$	$\frac{3}{7}$
F1-score	$\frac{2 \cdot P \cdot R}{P+R}$	$\frac{6}{11}$
False positive rate	$\frac{FP}{FP+TN}$	$\frac{1}{3}$
False negative rate	$\frac{FN}{FN+TP}$	$\frac{4}{7}$