Evaluation of Classifiers

Dr François Pitié

Problem 1.
Consider a binary classifier with the following confusion matrix:

	actual: 0	actual: 1
predicted: 0	TN=16	FN=4
predicted: 1	FP=10	TP=70

Compute the accuracy and comment on the performance of the classifier.

Problem 2.
Consider a multiclass classifier which produce the following results

```
y_true = [0, 0, 1, 2, 2, 2, 1, 1, 0]
y_pred = [1, 0, 1, 2, 1, 0, 1, 2, 0]
```

compute the confusion matrix, the accuracy, the micro precision and the macro precision.

Problem 3.
Bogus Forensics Ltd. has developed a new test for detecting potential criminals using a new patented hand writing analysis technology. The company claims an 89% accuracy and impresses the investors. Comment.

After investigation, you obtain the following confusion matrix for their detector:

	actual: 0	actual: 1
predicted: 0	TN=80	FN=8
predicted: 1	FP=3	TP=9

A positive prediction means that we predict that the person will commit a crime. Make your own analysis on the value of the product.