

## EXERCISE PERFORMANCE EVALUATION MEASURES

We have a data set with 220 instances having information about people who have taken a loan from XYZ Bank. The instances belong to two classes: class '0' (Non-Defaulters) and class '1' (Defaulters). We fit a classifier on this data set and obtain the following confusion matrix.

		ACTUAL CLASS	
		POSITIVE (0)	NEGATIVE (1)
PREDICTED CLASS	POSITIVE (0)	TRUE POSITIVE (TP) 153	FALSE POSITIVE (FP) 13
	NEGATIVE (1)	FALSE NEGATIVE (FN) 33	TRUE NEGATIVE (TN) 21

Calculate the following metrics: accuracy, error rate, false positive rate, false negative rate, sensitivity, specificity, positive predicted value, negative predicted value, geometric mean of accuracies, mean class weighted accuracy (with  $w=0$  and  $w=1$ ), F-measure (with  $\beta=0$  and  $\beta=1$ ), AUC, and Gini coefficient.