

Performance Metrics

Confusion Matrix

		Predicted Class	
		Positive	Negative
Actual Class	Positive	True Positive (TP)	False Positive (FP)
	Negative	False Negative (FN)	True Negative (TN)
		Correct	Errors

Sensitivity (Recall)

$$TP / (TP + FN)$$

How many actual positives detected

Specificity

$$TN / (TN + FP)$$

How many actual negatives identified

PPV (Precision)

$$TP / (TP + FP)$$

Positive predictive value

NPV

$$TN / (TN + FN)$$

Negative predictive value

F1 Score

$$2 \cdot \text{Precision} \cdot \text{Recall} / (\text{Precision} + \text{Recall})$$

Harmonic mean of Precision & Recall

Matthews CC

Balanced measure even for imbalanced data

Range: -1 to +1, 0 = random