

# Performance Metrics

## Confusion Matrix

		Predicted Class	
		Positive	Negative
Actual Class	Positive	<b>True Positive</b> (TP)	<b>False Positive</b> (FP)
	Negative	<b>False Negative</b> (FN)	<b>True Negative</b> (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