

# 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)

$$\text{TP} / (\text{TP} + \text{FN})$$

*How many actual positives detected*

## Specificity

$$\text{TN} / (\text{TN} + \text{FP})$$

*How many actual negatives identified*

## PPV (Precision)

$$\text{TP} / (\text{TP} + \text{FP})$$

*Positive predictive value*

## NPV

$$\text{TN} / (\text{TN} + \text{FN})$$

*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*