

- Describe the differences between accuracy, precision, and recall.

- Accuracy is simply a ratio of correctly predicted observation to the total observations. Accuracy is a useful measure but only when you have symmetric datasets where values of false positive and false negatives are almost same. Therefore, we need to also consider Precision and Recall.
- **Accuracy = (TP+TN) / (TP+FP+FN+TN)**

Actual Class	Predicted class		
		Class = Yes	Class = No
	Class = Yes	True Positive	False Negative
	Class = No	False Positive	True Negative

- Precision is the ratio of correctly predicted positive observations to the total predicted positive observations. The question that this metric answer is of all points that labeled as positive, how many were actually positive?
- **Precision = $TP / (TP+FP)$**

Actual Class	Predicted class		
		Class = Yes	Class = No
	Class = Yes	True Positive	False Negative
	Class = No	False Positive	True Negative

- Recall (Sensitivity) is the ratio of correctly predicted positive observations to the all observations in actual class.
- **Recall = TP / (TP+FN)**

Actual Class	Predicted class		
		Class = Yes	Class = No
	Class = Yes	True Positive	False Negative
	Class = No	False Positive	True Negative