

Evaluation metrics AND Imbalanced Dataset

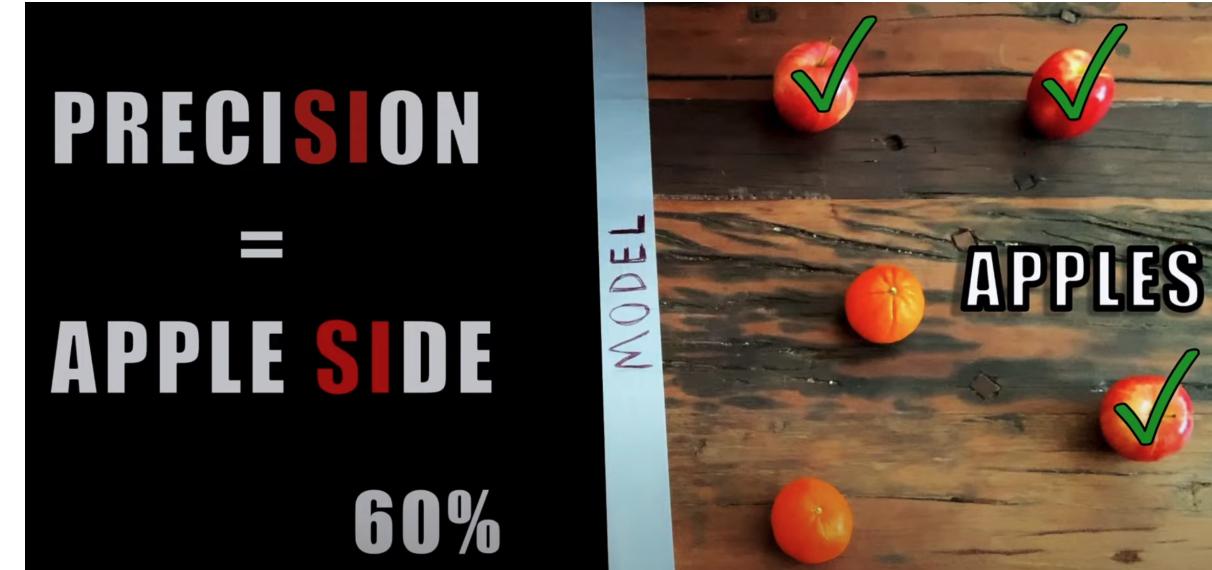
Evaluation metrics (for classification models)

Accuracy

- Total correct / Total observations

Precision

$$\text{Precision} = \frac{tp}{tp + fp}$$

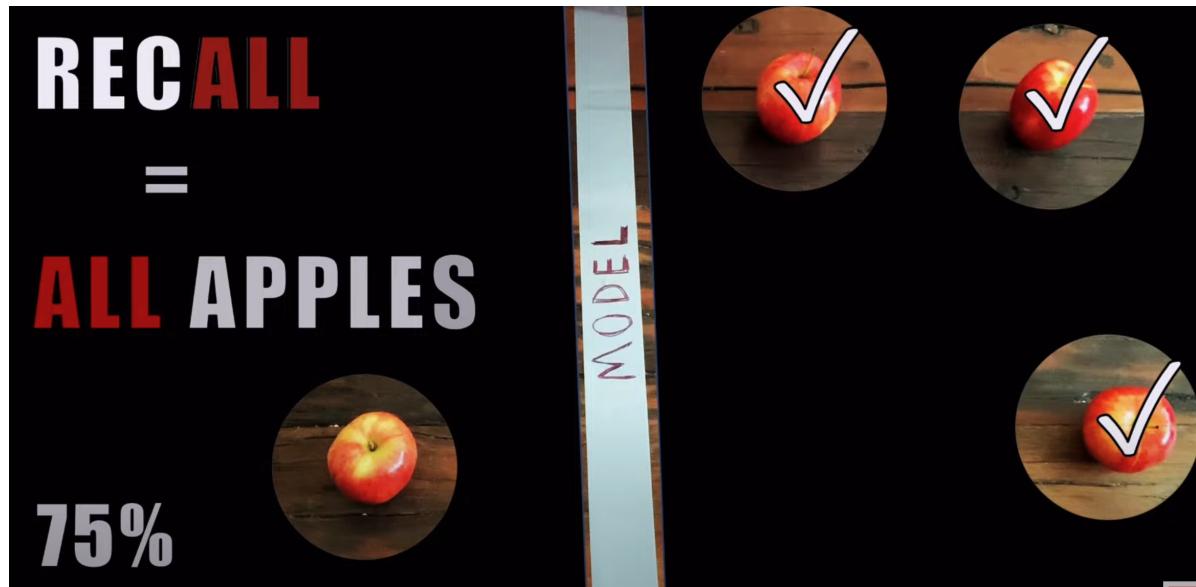


Recall

- 也叫Sensitivity !

- 也叫True Positive Rate (TPR) 在ROC曲线里的竖轴！

$$\text{Recall} = \frac{tp}{tp + fn}$$



F1

F1 Score is balance between Precision and Recall



Note: 再某种特定情况下，比如Class A是有病，Class B是没病，那宁愿把没病说成有病，也不能错过一个病人。也就是想avoid class A as B，那就要Recall高一些的model。

Confusion Matrices:

		Actual	
		Has Heart Disease	Does Not Have Heart Disease
Predicted	Has Heart Disease	True Positives	False Positives
	Does Not Have Heart Disease	False Negatives	True Negatives