

Getting Started with Machine Learning

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In this tutorial we will be covering F1 Score.

Confusion Matrix, Precision and Recall are prerequisites for this tutorial.

If you don't know, check 13th and 14th video in my "Getting Started with ML" playlist.

So what is F1-Score ?

In statistical analysis of binary classification, the F1 score (also F-score or F-measure) is a measure of a test's accuracy. The F1 score is the harmonic mean of the precision and recall, where an F1 score reaches its best value at 1 (perfect precision and recall) and worst at 0.

Source : https://en.wikipedia.org/wiki/F1_score

The F_1 Score is given by :

$$F_1 = 2 * \frac{Precision * Recall}{Precision + Recall}$$

y	0	0	0	1	1	1
y_pred	0	1	1	1	1	1

Confusion Matrix :

TP = 3, TN = 1, FP = 2, FN = 0

Precision = 0.6

Recall = 1.0

$$F_1 = 2 * \frac{P * R}{P + R} = 2 * \frac{0.6 * 1.0}{0.6 + 1.0} = 2 * \frac{0.6}{1.6} = 0.75$$