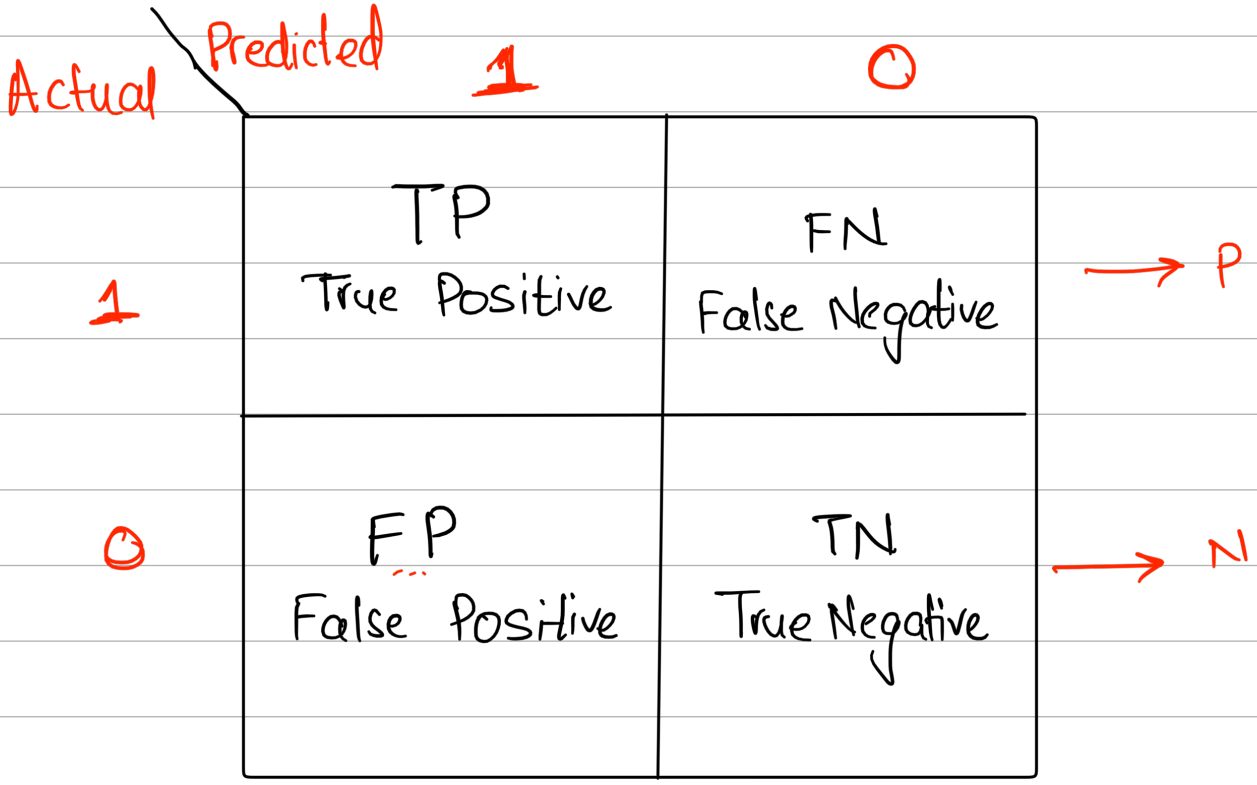
Confusion Matrix



Precision and Recall

↳ information retrieval

$$\text{Precision}^{(1)} = \frac{TP}{TP+FP} \quad ; \quad \text{Precision}^{(0)} = \frac{TN}{TN+FN}$$

What do we infer from precision :-

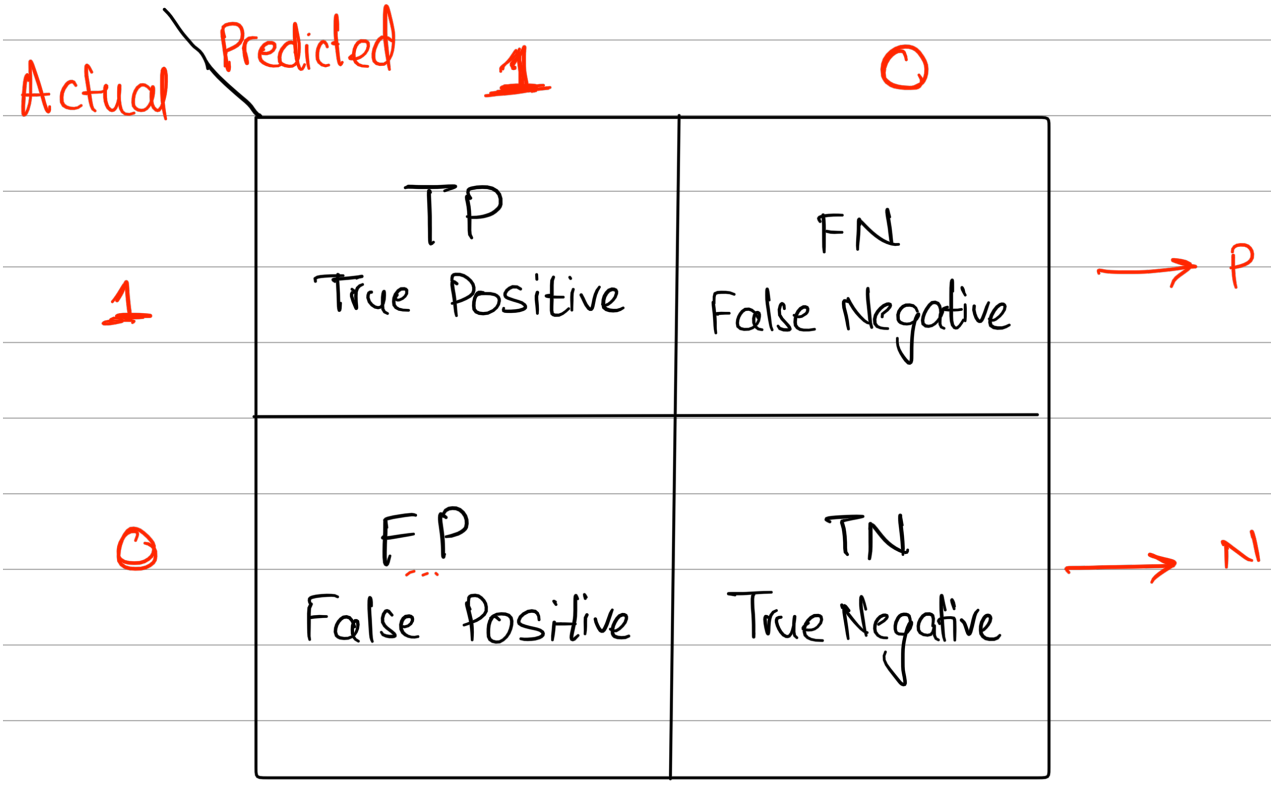
↳ out of total positives (1) predicted by the model, what is the percentage of actual positive results.

↳ out of total negatives (0) predicted by the model, what is the percentage of actual negative results

(1)
Recall = True Positive Rate = $\frac{TP}{TP+FN} = \frac{TP}{P}$

(0)
Recall = True Negative Rate $\frac{TN}{TN+FP} = \frac{TN}{N}$

confusion Matrix



Implement precision and recall in python, sklearn:-

↳ classification_report module

$0 \leq$ Precision, recall ≤ 1

F1-Score

$$2 * \frac{\text{Precision} * \text{Recall}}{\text{Precision} + \text{recall}} = \text{F1\_score}$$

$$0 \leq \text{F1\_score} \leq 1$$

↳ The higher F1_score is, the more accurate your model is.