

confusion_matrix based question

	precision	recall	f1-score	support
0	0.76	0.96	0.85	85
1	0.88	0.47	0.61	49
accuracy			0.78	134
macro avg	0.82	0.72	0.73	134
weighted avg	0.81	0.78	0.76	134

1. Recall-related questions (TP & FN)

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

Questions:

- What is the purchased recall?
- How many actual buyers did the model successfully identify?
- What percentage of people who purchased were correctly predicted?
- How well does the model capture real buyers? (Recall)

2. Precision-related questions (TP & FP)

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

Questions:

- What is the purchased precision?
- Out of all people predicted to buy, how many actually bought?
- How reliable is the prediction that a customer will buy? (Precision)

3. Accuracy-related questions (TP, TN, FP, FN)

Accuracy = (TP + TN) / Total

Questions:

- What is the overall accuracy of the model?

4. False Negative–related questions (missed positives)

Questions:

- How many buyers did we fail to identify (FN)?
 - Are we missing high-value customers? (FN)
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5. False Positive–related questions (false alarms)

Questions:

- How many people were predicted to buy but did not (FP)?
 - Are we wasting money targeting non-buyers? (FP)
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