macro F1

1 F1

For N classification problems, F_1 of category i is defined as:

$$F_1 = \frac{2TP}{2TP + FP + FN}$$

Among them,
TP: predict category i as the number of samples of category i.
FN: The number of samples that predict category i as a non-i class.
FP: The number of samples that predict non-i classes as class i.

2 macro F1

macro F_1 is used to evaluate multi-classification problems.
For N classification problems, macro F_1 is defined as:

$$macro - F_1 = \frac{F_1 - score_1 + F_1 - score_2 + \ldots + F_1 - score_N}{N}$$

Among them, $F_1 - score_i (1 \leq i \leq N, i \in Z)$ is F_1 of category i.
Macro F_1 treats all categories equally, and its value will be affected by the rarity of the category. Macro F_1 is not affected by data imbalance.

References

https://scikit-learn.org/stable/modules/generated/sklearn.metrics.f1_score.html