F-Beta (correct formula)

$$F_{Beta} = (1+\beta^2)\ \frac{Precision * Recall}{\beta^2(Precision) + Recall}$$

Precision : How many predicted positives are actually positive

Recall : How many of the actual positive do you successfully catch

β : This is your wieghting factor. It determines how much you value recall over precision

$\beta = 1$ → Equal weight to precision & Recall

$$F_{\beta=1} = \frac{precision * Recall}{precision + Recall}$$

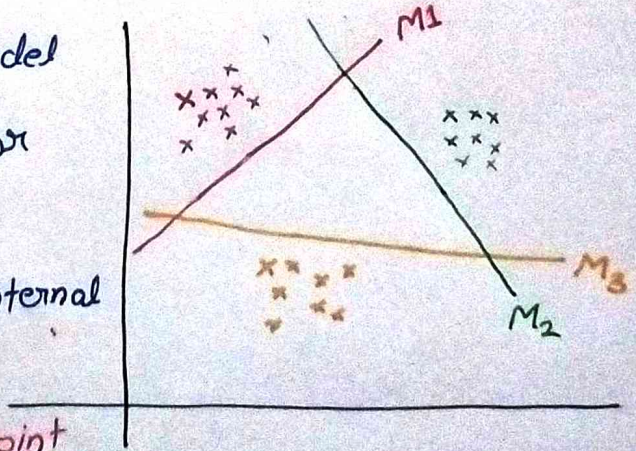
$\beta = 2$ recall higher precision low

$\beta = 0.5$ precision high recall low

Logistic Regression (OvR) (One over Rest) (Multiclass)

Here we create internal model like model 1 predicts for class 1 against rest

combined value of all internal models is final output



For eg: if new data point comes for prediction

$M_1 \rightarrow 0.25$

$M_2 \rightarrow 0.20$

$M_3 = 0.55$

[0.25, 0.20, 0.55]

↓

M_3 → class 3