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Tentukan :

- precision
- recall
- average class accuracy

Confusion Matrix

Target	Prediction	
	Pass	Fail
Pass	1	1
Fail	0	2

$$\begin{aligned} \text{Precision} &= \frac{1}{1+0} \\ &= 1 \end{aligned}$$

$$\begin{aligned} \text{Recall} &= \frac{1}{1+1} \\ &= \frac{1}{2} \rightarrow 0.5 \end{aligned}$$

$$\begin{aligned} F_1 &= 2 \cdot \frac{(1 \cdot 0.5)}{1+0.5} \\ &= 0.67 \end{aligned}$$

$$\begin{aligned} \text{Average class accuracy} &= \frac{1}{2} \cdot \left(\frac{1}{1+1} + \frac{2}{2+0} \right) \\ &= \frac{1}{2} \cdot \left(\frac{1}{2} + \frac{2}{2} \right) = \frac{1}{2} \cdot \frac{3}{2} \\ &= 0.75 \end{aligned}$$

Confusion Matrix k-fold 1,3,4

Target	Prediction	
	Pass	Fail
Pass	0	2
Fail	0	2

$$\begin{aligned} \text{Precision} &= \frac{0}{0+0} \\ &= 0 \end{aligned}$$

$$\begin{aligned} \text{Recall} &= \frac{0}{0+2} \\ &= 0 \end{aligned}$$

$$\begin{aligned} \text{Average class accuracy} &= \frac{1}{2} \cdot \left(\frac{0}{0+2} + \frac{2}{2+0} \right) \\ &= \frac{1}{2} \cdot (0+1) \\ &= \frac{1}{2} \\ &= 0.5 \end{aligned}$$

$$\begin{aligned} F_1 &= \frac{2(0 \cdot 0)}{0} \\ &= 0 \end{aligned}$$

Confusion Matrix k fold 2

Target	Prediction	
	Pass	Fail
Pass	2	0
Fail	2	0

$$\begin{aligned} \text{Precision} &= \frac{2}{4} \\ &= \frac{2}{2+2} \end{aligned}$$

$$\text{Recall} = \frac{2}{2+0}$$

$$\begin{aligned} F_1 &= \frac{2 \cdot (0.5 \cdot 1)}{0.5 + 1} \\ &= \frac{2 \cdot 0.5}{1.5} \\ &= 0.67 \end{aligned}$$

$$\begin{aligned} \text{Average class accuracy} &= \frac{1}{2} \left(\frac{2}{2+0} + \frac{0}{0+2} \right) \\ &= \frac{1}{2} (1 + 0) \\ &= 0.5 \end{aligned}$$