

1. Precision ( positive predictive value):

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

$$= 36 / 36 + 6$$

$$= 36 / 42 = 0.857$$

$$= 85.7\%$$

2. Recall ( Sensitivity, True positive rate):

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

$$= 36 / 36 + 5$$

$$= 36 / 41 = 0.878$$

$$= 87.8\%$$

3. F1\_Score ( Balance Between Precision & Recall):

$$\text{F1\_Score} = 2 * \text{precision} * \text{recall} / \text{precision} + \text{recall}$$

$$= 2 * 0.857 * 0.878 / 0.857 + 0.878$$

$$= 2 * 0.7524 / 1.735$$

$$= 0.866$$

$$= 86.6\%$$

4. Accuracy ( over all correct prediction):

$$\text{Accuracy} = \text{TP} + \text{TN} / \text{TP} + \text{TN} + \text{FP} + \text{FN}$$

$$= 36 + 73 / 36 + 73 + 6 + 5$$

$$= 109 / 120 = 0.908$$

$$= 90.8\%$$