

		ACTUAL CLASS	
		POSITIVE (0)	NEGATIVE (1)
PREDICTED CLASS	POSITIVE (0)	TRUE POSITIVE (TP) 153	FALSE POSITIVE (FP) 13
	NEGATIVE (1)	FALSE NEGATIVE (FN) 33	TRUE NEGATIVE (TN) 21

$$Accuracy = \frac{TP + TN}{TP + TN + FP + FN} = \frac{153 + 21}{153 + 21 + 13 + 33} = 0,791 \quad (1)$$

$$Error = \frac{FP + FN}{TP + TN + FP + FN} = 1 - Accuracy = 1 - 0,791 = 0,209 \quad (2)$$

$$FPrate = \frac{FP}{FP + TN} = \frac{13}{13 + 21} = 0,382 \quad (3)$$

$$FNrate = \frac{FN}{FN + TP} = \frac{33}{33 + 153} = 0,177 \quad (4)$$

$$TPrate = \frac{TP}{TP + FN} = 1 - FNrate = 1 - 0,177 = 0,823 \quad (5)$$

$$TNrate = \frac{TN}{TN + FP} = 1 - FPrate = 1 - 0,382 = 0,618 \quad (6)$$

$$Precision = \frac{TP}{TP + FP} = \frac{153}{153 + 13} = 0,922 \quad (7)$$

$$NPV = \frac{TN}{TN + FN} = \frac{21}{21 + 33} = 0,389 \quad (8)$$

$$Gmean = \sqrt{TPrate * TNrate} = \sqrt{0,823 * 0,618} = 0,713 \quad (9)$$

$$CWA = w * TPrate + (1 - w) * TNrate \quad (10)$$

when $w = 0$, $CWA = 0 * 0,823 + (1 - 0) * 0,618 = 0,618$

when $w = 1$, $CWA = 1 * 0,823 + (1 - 1) * 0,618 = 0,823$

$$Fmeasure = \frac{(1 + \beta^2) * recall * precision}{\beta^2 * recall + precision} \quad (11)$$

when $\beta = 0$

$$Fmeasure = \frac{0,823 * 0,922}{0 + 0,922} = 0,822 \quad (12)$$

when $\beta = 1$

$$Fmeasure = \frac{2 * 0,823 * 0,922}{0,823 + 0,922} = 0,869 \quad (13)$$

$$AUC = \frac{TPrate * TNrate}{2} = \frac{0,823 * 0,618}{2} = 0,720 \quad (14)$$

$$Gini = 2 * AUC - 1 = 2 * 0,720 - 1 = 0,440 \quad (15)$$