

Performance Analysis

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Testing

Actual data - 100

90 - 0 - not leave

10 - 1 - left

Model - 2

Prediction

80 - 0 - not leave

20 - 1 - leave

$$A = \frac{90}{100} = 90\%$$

$$R = \frac{10}{10} = 100\%$$

$$P = \frac{10}{90} = 11\%$$

Model - 1

Prediction

95 - 0 - not leave

05 - 1 - leave

$$A = \frac{95}{100} = 95\%$$

$$\text{Relevant accuracy to class (Recall)} = \frac{05}{10} = 50\%$$

$$P = \frac{5}{95} = 5\%$$

Actual	Prediction
1	1 ✓
0	0 ✓
0	0 ✓
0	0 ✓
1	0
1	0
0	1
1	0
1	0
0	0
1	1 ✓
0	0 ✓
0	0 ✓
1	0
1	0
0	0 ✓
1	0
0	0 ✓
1	0
1	1 ✓

$$A = \frac{14}{20} = 70\%$$

$$R = \frac{3}{11} = 27\%$$

$$P = \frac{3}{14} = 21\%$$

$$F1 \text{ score} = \frac{2}{\frac{1}{R} + \frac{1}{P}}$$

Pred

$$5 \times FP - 100 \times FN$$

$$5 \times TP + 100 \times TP$$

Actual pred	0	1
	Negative	Positive
0	True Negative	False Positive

Actual

Actual pred	0 Negative	1 Positive
0	True Negative TN	False Positive FP
1	False Negative FN	True Positive TP