

Accuracy

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$$\text{Accuracy} = \frac{\text{Correct Predictions}}{\text{Total Predictions}}$$

		Prediction outcome	
		positive	negative
Actual value	positive	<i>TP</i>	<i>FN</i>
	negative	<i>FP</i>	<i>TN</i>

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$$\text{Accuracy} = \frac{\text{Correct Predictions}}{\text{Total Predictions}}$$

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

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Actual
value

Prediction outcome			
		positive	negative
positive	positive	<i>TP</i>	<i>FN</i>
	negative	<i>FP</i>	<i>TN</i>

Accuracy



Accuracy

500 Patients with Cancer symptoms



494 Negative Results

6 Positive Results

Accuracy

We train a model to detect cancer

500 Patients with Cancer symptoms



494 Negative Results

6 Positive Results

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		Prediction outcome	
		positive	negative
Actual value	positive	4	2
	negative	8	486

500 Patients with Cancer symptoms



494 Negative Results

6 Positive Results

Accuracy

We train a model to detect cancer

		Prediction outcome	
		positive	negative
Actual value	positive	4	2
	negative	8	486

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

Accuracy : dumb model

We train a “dumb” model to detect cancer

Negative report for every patient
Or

No patient has cancer

500 Patients with Cancer symptoms



494 Negative Results

6 Positive Results

Accuracy : dumb model

We train a “dumb” model to detect cancer

Negative report for every patient

Or

No patient has cancer

		Prediction outcome	
		positive	negative
Actual value	positive	0	6
	negative	0	494

Accuracy : dumb model

We train a “dumb” model to detect cancer

Negative report for every patient

Or

No patient has cancer

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

		Prediction outcome	
		positive	negative
Actual value	positive	0	6
	negative	0	494