

Confusion Matrix

		Predicted labels		
		0	0.5	1
true labels	0	a	b	c
	0.5	d	e	f
	1	g	h	i

Labels

0 \Rightarrow no algae

0.5 \Rightarrow blue-green algae

1 \Rightarrow green algae

$$\text{Balanced Error Matrix (BER)} = \frac{\frac{a+c}{a+b+c} + \frac{d+f}{d+e+f} + \frac{g+h}{g+h+i}}{3}$$

$$\text{No Algae Label Error Rate} = \frac{a+c}{a+b+c}$$

$$\text{Blue-green Algae Label Error Rate} = \frac{d+f}{d+e+f}$$

$$\text{Green Algae Label Error Rate} = \frac{g+h}{g+h+i}$$

$$\text{Accuracy} = \frac{a+e+i}{\sum_{i=1}^3 \sum_{j=1}^3 C_{ij}}, \quad \text{where } C_{ij} \text{ is the } i, j \text{ entry of the confusion matrix}$$