

# Statistical Classification Metrics

<div><div><div>Sensitivity Recall Power</div><div><table><tr><td>TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table><div></div><table><tr><td>TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table><div>True Positive Rate</div></div></div></div>	TP	FP	FN	TN	TP	FP	FN	TN	<div><div><div>Precision</div><div><table><tr><td>TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table><div></div><table><tr><td>TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table><div>Positive Predictive Value</div></div></div></div>	TP	FP	FN	TN	TP	FP	FN	TN	<div><div><div>Type I Error <math>\alpha</math> Fall Out</div><div><table><tr><td>TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table><div><div>+</div><div>/</div></div><table><tr><td>TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table><div><div>+</div></div><div>False Positive Rate</div></div></div></div>	TP	FP	FN	TN	TP	FP	FN	TN	<div><div><div>Accuracy</div><div><table><tr><td>TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table><div></div><table><tr><td>TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table></div></div></div>	TP	FP	FN	TN	TP	FP	FN	TN	<div><div><div>F1 Score F Measure</div><div><table><tr><td>2× TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table><div></div><table><tr><td>2× TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table></div></div></div>	2× TP	FP	FN	TN	2× TP	FP	FN	TN
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<div><div><div>Type II Error <math>\beta</math></div><div><table><tr><td>TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table><div></div><table><tr><td>TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table><div>False Negative Rate</div></div></div></div>	TP	FP	FN	TN	TP	FP	FN	TN	<div><div><div>Specificity</div><div><table><tr><td>TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table><div></div><table><tr><td>TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table><div>True Negative Rate</div></div></div></div>	TP	FP	FN	TN	TP	FP	FN	TN	<div><div><div>Confusion Matrix</div><div><div>actual</div><table><tr><td></td><td>T</td><td>F</td></tr><tr><td><div>predicted</div><div>P</div></td><td>TP</td><td>FP</td></tr><tr><td><div>N</div></td><td>FN</td><td>TN</td></tr></table><div>TP: True Positive FP: False Positive FN: False Negative TN: True Negative</div><div>actual = observed predicted = expected</div></div></div></div>		T	F	<div>predicted</div> <div>P</div>	TP	FP	<div>N</div>	FN	TN	<div><div><div>Matthews Correlation Coefficient</div><div><table><tr><td>TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table><div><div>difference of products</div></div><table><tr><td>TP</td><td>FP</td></tr><tr><td>FN</td><td>TN</td></tr></table><div><div>square root of product of sums</div></div></div></div></div>	TP	FP	FN	TN	TP	FP	FN	TN								
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