# Confusion Matrix, ROC Plot

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| True Class | Classified As | |
|---|---|---|
| | Positive | Negative |
| Positive (#P) | #TP | |
| Negative (#N) | #FP | |

The 4 numbers can be reduced to 2 rates:

TP = #TP/#P = accuracy on positive examples

FP = #FP/#N = error rate on negative examples

Rates are independent of class distribution.

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ROC plots TP as a function of FP.

Classifier = point in an ROC plot

Ideal = <0,1>

Trivial = <0,0> or <1,1> or <x,x>

Parameterized Classifier = curve in an ROC plot