Metrics for model performance:

AUC – area under the (ROC) curve

ROC – receiver operator characistic

Accuracy

Which is best?

AUC is great for skewed distributions (e.g. 99% of the data is class 1, and only 1% is class 2) This is because it would be very easy to predict the data is class 1 (pretend your classifier just predicts everything is ‘class 1’, it would correct 99% of the time).

Reference: <http://datascience.stackexchange.com/questions/806/advantages-of-auc-vs-standard-accuracy>

‘So basically, what you're actually getting when you do an AUC over accuracy is something that will strongly discourage people going for models that are representative, but not discriminative, as this will only actually select for models that achieve false positive and true positive rates that are significantly above random chance, which is not guaranteed for accuracy.’