Machine Learning Notes

Error rates

Reminder on errors. Consider (again) a test used to predict whether or not someone has a disease.

		disease	
		Present	Absent
test	positive	TP	FP
	negative	FN	TN

- Sensitivity is the probability to test positive in the prescence of the disease
  - P(positive test| disease) = TP/(TP + FN)
- Specificity is the probability to test negative in the absence of the disease
  - P(negative test| no disease) = TN/(TN + FP)
- Positive predictive value is the probability of having the disease given a positive test
  - P(disease|positive test) = TP/(TP + FP)
- Negative predictive value is the probability of not having the disease given a negative test
  - P(no disease|negative test) = TN/(TN + FN)
- Accuracy is the probability of the test giving the correct result
  - P = TN + TP)/(TP + FP + TN + FN)