Binary Cross Entropy

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# For binary classification:

cross.entropy <- function(y,p){  
 -(y \* log(p,base = 10) + ((1-y)\*(1 - log(p,base=10))))  
}  
  
#if the predicted class is 1:  
  
y <- 1  
  
p <- seq(0,1,0.01)  
  
loss <- cross.entropy(y,p)  
  
require(latex2exp)

## Loading required package: latex2exp

plot(x=p,y=loss, type="b", col=rainbow(250),cex=0.5, main = TeX("J($\\theta$) = -(y log(p)-(1-log(p)))"),ylab = "Cross Entropy", xlab = TeX("$\\hat{y}$"))

