

Exercise: Pessimism of LOOCV

(Source: (?), p152.). Suppose we have a completely random labeled dataset (i.e., the features $\mathbf{x}$ tell us nothing about the class labels y) with N_1 examples of class 1, and N_2 examples of class 2, where $N_1 = N_2$. What is the best misclassification rate any method can achieve? What is the estimated misclassification rate of the same method using LOOCV?