

HW #2

DUE FRIDAY, OCTOBER 16, 11:59 PM (ONLINE SUBMISSION VIA GRADESCOPE)

- (1) 2.1 LFD (Learning from data book)
- (2) 2.2 LFD
- (3) 2.4 LFD
- (4) 2.11 LFD
- (5) 2.12 LFD
- (6) 2.23 LFD
- (7) To show that k is a break point for H
 - Show a set of k points x_1, \dots, x_k which H can shatter.
 - Show H can shatter any set of k points.
 - Show a set of k points x_1, \dots, x_k which H cannot shatter.
 - Show H cannot shatter any set of k points x_1, \dots, x_k .

Select appropriate choice but explain all statements no matter your choice.

- (8) Show that the VC dimension of a perceptron in R^d is $d + 1$