

CMSC 478 Introduction to Machine Learning
Spring 2019
Homework 9

Due at the beginning of class Thursday May 9th

Show what happens for the first two rounds of boosting for the following examples. Assume that a base classifier only tests one attribute. Specifically, show the following:

- The weight on each instance before the first round, after the first round, and after the second round
- α_1 and α_2

Also indicate which examples will still be misclassified?

| Attributes | | | Class |
|------------|-------|-------|-------|
| x_1 | x_2 | x_3 | y |
| 0 | 0 | 0 | -1 |
| 0 | 0 | 1 | -1 |
| 0 | 1 | 0 | 1 |
| 0 | 1 | 1 | -1 |
| 1 | 0 | 0 | -1 |
| 1 | 0 | 1 | 1 |
| 1 | 1 | 0 | 1 |
| 1 | 1 | 1 | 1 |