**CPS 584**

1. Use Jupyter to train a simple perceptron model to classify the patterns on a NAND function. To begin training, select your initial weights randomly between 2 and -2.

|  |  |  |
| --- | --- | --- |
| X1 | X2 | Target |
| 0 | 0 | 1 |
| 0 | 1 | 1 |
| 1 | 0 | 1 |
| 1 | 1 | 0 |

Extra Points- 2% : Make an animation movie to show the movement of your classification line from beginning to final position.

1. Use Jupyter to train a simple perceptron model to classify a set of randomly generated patterns. Generate randomly two set of data set, each one with 50 data patterns, in two dimensions x1 and x2. One data set has 0 <= x1 <= 3 and 0 <= x2 <= 3 with target of 0, and the second data set has 6 <= x1 <= 9 and 6 <= x2 <= 9 with target of 1. To begin training, select your initial weights randomly between 2 and -2.