Perceptron Learning Algorithm

Initialize $w_0,\ldots,w_d$ /* either all $w_i=0$ or, more typically, a small random number */

Until <stopping condition> /* Example: Until no weights change */

Randomly order the data $<x^1,\ldots,x^N>$

For $j = 1$ to $N$ do

    if $w \cdot x^j \geq 0$ then $h=1$ else $h=0$

    For $i = 0$ to $d$ do

        $w_i = w_i + \alpha \times (y^i - h) \times x_i^j$ /* Perceptron learning rule */