w_0 -3

x_1 3

w_1 2

$*$ 6

x_2 1

w_2 -2

$*$ -2

$+$ 1

σ 0.73

$$\sigma(a) = \frac{1}{1 + exp^{-a}}$$

$$\frac{\partial a}{\partial w_2} = aw_2 \qquad \nabla_{\vec{w}}a = (\vec{w}^T\vec{x} - y)\vec{x}^T$$

Backprop