

Consider the NN

$$L = \frac{1}{2m} \sum_{i=1}^{N} (p-y)^{2}$$

$$I_{2} \bigcup_{(x_{1})} \bigcup_{i=1}^{N} \bigvee_{(x_{2})} (p-y)^{2}$$

$$I_{2} \bigcup_{(x_{2})} \bigcup_{i=1}^{N} \bigvee_{(x_{2})} (p-y)^{2}$$

$$I_{2} \bigcup_{(x_{2})} \bigvee_{i=1} \bigvee_{(x_{2})} (p-y)^{2}$$

$$I_{2} \bigcup_{(x_{2})} \bigvee_{i=1}^{N} \bigvee_{(x_{2})} (p-y)^{2}$$

$$I_{2} \bigcup_{(x_{2})} \bigvee_{(x_{2})} (p-y)^{2}$$

$$I_{2} \bigcup_$$

BACKPROPAGATION

$$\frac{\partial L}{\partial p} = \frac{1}{2m} \sum_{i=1}^{N} 2(p-y) = \frac{1}{m} \sum_{i=1}^{N} (p-y)$$

$$\frac{\partial ReLU}{\partial c} = \begin{cases} 1, & \text{if } c > 0 \\ 0, & \text{if } c < 0 \end{cases}$$

$$\frac{\partial c}{\partial \omega_1} = \frac{\partial}{\partial \omega_1} \left(x_1 \omega_1 + x_2 \omega_2 + b \right) = x_1$$

$$= \frac{\partial L}{\partial w_1} = \frac{1}{m} \sum_{i=1}^{N} (p-y) \cdot Clifc_{70}(0) \cdot x_1$$

$$=) \frac{\partial L}{\partial w_2} = \frac{1}{m} \sum_{i=1}^{N} (p-y) \cdot Clif (c7,0,0) \cdot x_2$$

$$= \frac{\partial u_{2}}{\partial w_{2}} = \frac{\partial u_{3}}{\partial w_{4}} = \frac{\partial u_{4}}{\partial w_{5}} = \frac{\partial u_{5}}{\partial w_{5}$$