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Part 1: Calculating the Gradients for the Output Layer Weights

$$\frac{\partial E}{\partial W_q} = (z-t) \times z(1-z) \times out_{b1}$$

output for nodes (0 or 1)

W_5

$= (0.5934 - 0) \times 0.5934(1 - 0.5934) \times 0.7020$

$= 0.5934 \times 0.5934(0.4066) \times 0.7020$

$= 0.1005$

W_7

$= (0.5934 - 0) \times 0.5934(1 - 0.5934) \times 0.5841$

$= 0.5934 \times 0.5934(0.4066) \times 0.5841$

$= 0.0836$

W_6

$= (0.7353 - 1) \times 0.7353(1 - 0.7353) \times 0.7020$

$= -0.2647 \times 0.7353(0.2647) \times 0.7020$

$= -0.0362$

W_8

$= (0.7353 - 1) \times 0.7353(1 - 0.7353) \times 0.5841$

$= -0.2647 \times 0.7353(0.2647) \times 0.5841$

$= -0.0301$

Part 2: Gradients for Output Layer Bias Weights

$$\delta_z = (z-t)z(1-z)$$

bw3

$= (0.5934 - 0) \times 0.5934(1 - 0.5934)$

$= 0.5934 \times 0.5934(0.4066)$

$= 0.1432$

bw4

$= (0.7353 - 1) \times 0.7353(1 - 0.7353)$

$= -0.2647 \times 0.7353(0.2647)$

$= -0.0515$