Part 4: Calculating Gradients for Hidden Layer Bias Weights (bw1 & bw2)

$$\delta_b = \left(\sum_c \delta_z W_i\right) out_i (1 - out_i)$$

bw1

$$= (-0.0134) \times 0.7020 (1 - 0.7020)$$
$$= -0.0028$$

bw2

$$= (0.0437) \times 0.5841 (1 - 0.5841)$$
$$= 0.0106$$

Gradient Values

$W_1 = -0.000420492$
$W_2 = 0.00159$
$W_3 = -0.000984$
$W_4 = 0.003715$
$W_5 = 0.1005$
$W_6 = -0.0362$
$W_7 = 0.0836$
$W_8 = -0.0301$

$bW_1 = -0.0028$
$bW_2 = 0.0106$
$bW_3 = 0.1432$
$bW_4 = -0.0515$

Output Layer

Hidden Layers