

Iteration 2

$$m = 1.7, b = 2.1$$

$$\begin{aligned} J_1 &= m_{\text{new}} x_1 + b_{\text{new}} \\ &= (1.7)1 + 2.1 \\ &= 3.8 \end{aligned}$$

$$\begin{aligned} J_2 &= \overline{m_{\text{new}}} x_2 + b_{\text{new}} \\ &= (1.7)3 + 2.1 \\ &= \underline{\underline{7.2}} \end{aligned}$$

(Gradients

$$\begin{aligned} \partial J / \partial m &= -2/2 (3 - 3.8)1 + (6 - 7.2)3 \\ &= 4.4 \end{aligned}$$

$$\begin{aligned} \partial J / \partial b &= -2/2 (3.3.8) + (6 - 7.2) \\ &= 2 \end{aligned}$$

$$m_{\text{new}} = 1.7 - 0.1 \times 4.4 = 1.26$$

$$b_{\text{new}} = 2.1 - 0.1 \times 2 = 1.9$$

$$m_{\text{new}(2)} = 1.26$$

$$b_{\text{new}(2)} = 1.9$$