

< Model Training Steps >

* ex) logistic regression

① "Define model": specify how to compute output given input x and parameters W, b

$$z = \text{np.dot}(W, x) + b$$

$$f_x = 1 / (1 + \text{np.exp}(-z))$$

② Specify loss and cost

$$\underline{L(f_{\vec{w}, b}(\vec{x}), y)}, \quad J(\vec{w}, b) = \frac{1}{m} \sum_{i=1}^m L(f_{\vec{w}, b}(\vec{x}^{(i)}), y^{(i)})$$

$$\hookrightarrow \text{logistic loss: } \text{loss} = -y * \text{np.log}(f_x) - (1-y) * \text{np.log}(1-f_x)$$

③ Train on data to minimize $J(\vec{w}, b)$

if using gradient descent algorithm...

$$W = W - \text{alpha} * dJ_{dW}$$

$$b = b - \text{alpha} * dJ_{db}$$

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pytorch 구현 연습!
"pytorch로 시작하는 딥러닝
입문"