

2. iterasyon

$$\theta_0 = \bar{\theta}_0 - \alpha \frac{\partial J(\theta)}{\partial \theta_0} \text{ seklinde}$$

$$\theta_1 = \bar{\theta}_1 - \alpha \frac{\partial J(\theta)}{\partial \theta_1} \text{ seklinde}$$

$$\frac{\partial J(\theta)}{\partial \theta_0} = \frac{1}{m} \sum_{i=1}^m (h_{\theta_0}(x_i) - y_i) = \frac{1}{3} [-1 + (-2) + (-3)] = -2$$

$$\frac{\partial J(\theta)}{\partial \theta_1} = \frac{1}{m} \sum_{i=1}^m (h_{\theta_0}(x_i) - y_i) \cdot x_i = \frac{1}{3} [(-1) \cdot 0 + (-2) \cdot 1 + (-3) \cdot 2] = -\frac{8}{3}$$

$$\theta_0 = 0.2 - (0.1) \cdot (-2) = 0.4$$

$$\theta_1 = 0.26 - (0.1) \cdot \left(-\frac{8}{3}\right) = 0.1026$$

3. iterasyon

$$\frac{\partial J(\theta)}{\partial \theta_0} = \frac{1}{m} \sum_{i=1}^m (h_{\theta}(x_i) - y_i) = \frac{1}{3} [(-1) + (-2) + (-3)] = -2$$

$$\frac{\partial J(\theta)}{\partial \theta_1} = \frac{1}{m} \sum_{i=1}^m (h_{\theta}(x_i) - y_i) \cdot x_i = \frac{1}{3} [(-1) \cdot 0 + (-2) \cdot 1 + (-3) \cdot 2] = -\frac{8}{3}$$

$$\theta_0 = 0.4 - (0.1) \cdot (-2) = 0.6$$

$$\theta_1 = 0.1026 - (0.1) \cdot \left(-\frac{8}{3}\right) = 0.3466$$