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6. Closed Form Solution

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Exercises due Mar 8, 2023 08:59 -03 Completed

Closed Form Solution**Video**
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Necessary and Sufficient Condition for a Solution

1/1 point (graded)

In the above video lecture, we verified the following result:

Computing the gradient of

$$R_n(\theta) = \frac{1}{n} \sum_{t=1}^n \frac{(y^{(t)} - \theta \cdot x^{(t)})^2}{2},$$

we get

$$\nabla R_n(\theta) = A\theta - b (= 0) \quad \text{where } A = \frac{1}{n} \sum_{t=1}^n x^{(t)} (x^{(t)})^T, \quad b = \frac{1}{n} \sum_{t=1}^n y^{(t)} x^{(t)}$$

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