

MITx 6.86x

Machine Learning with Python-From Linear Models to Deep Learning

Course **Progress** Discussion Dates Resources

☆ Course / Unit 2. Nonlinear Classification, Linear regression, Col... / Lecture 5.

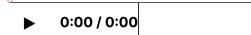


6. Closed Form Solution

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

Closed Form Solution



Video

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Transcripts

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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

$$R_{n}\left(heta
ight)=rac{1}{n}\sum_{t=1}^{n}rac{\left(y^{\left(t
ight)}- heta\cdot x^{\left(t
ight)}
ight)^{2}}{2},$$

we get

$$abla R_n\left(heta
ight) = A heta - b\left(=0
ight) \quad ext{where } A = rac{1}{2}\sum^n x^{(t)} \left(x^{(t)}
ight)^T, \ b = rac{1}{2}\sum^n x^{(t)} \left(x^{(t)}
ight)^T$$

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