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4. Hinge Loss and Objective Function

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Exercises due Feb 15, 2023 08:59 -03 Completed

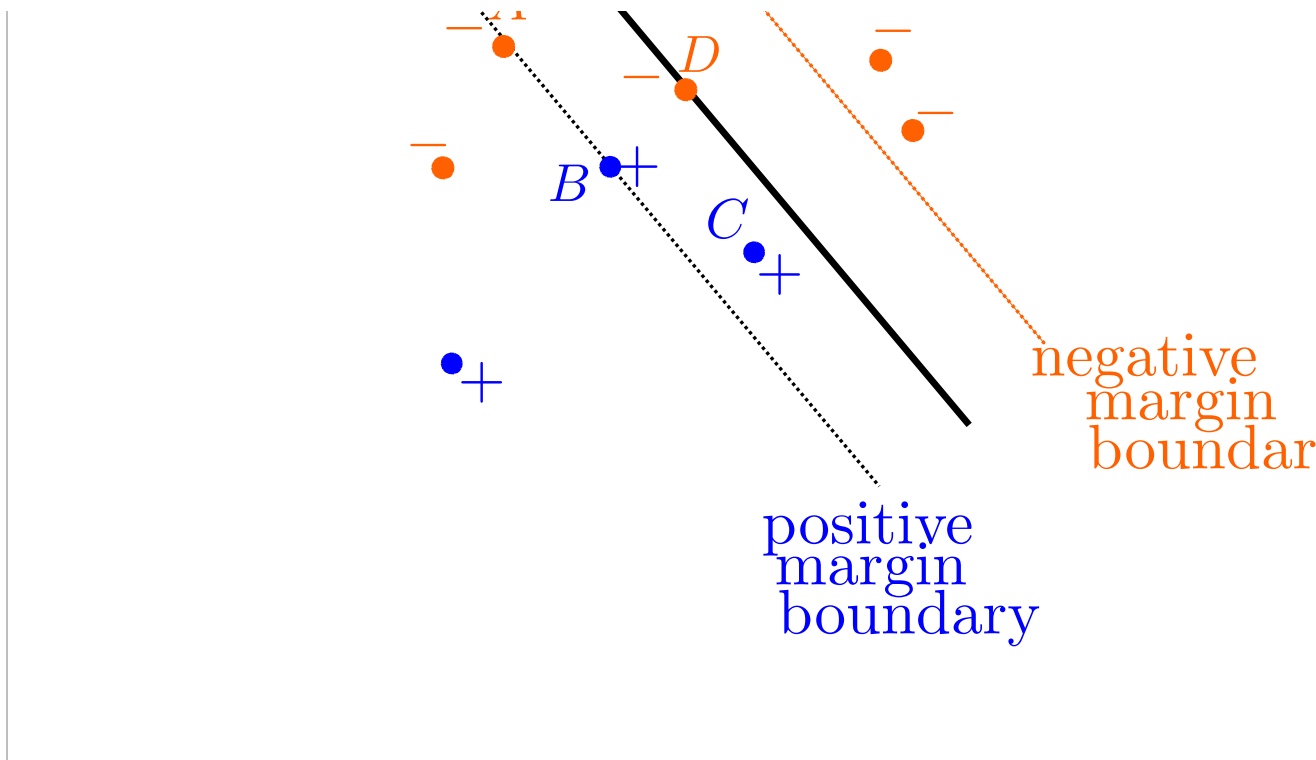
Hinge Loss and Objective Function**Video** [Download video file](#)**Transcripts** [Download SubRip \(.srt\) file](#) [Download Text \(.txt\) file](#)**Hinge Loss Exercise 1**

3/3 points (graded)

Compute the output of Hinge Loss function (as described in the video) for the following

 $\text{Loss}_h(0) =$ $\text{Loss}_h(0.2) =$ $\text{Loss}_h(-10) =$ **Submit**

You have used 1 of 2 attempts



What is the hinge loss of point A, $\text{Loss}_h(y^{(a)}(\theta \cdot x^{(a)} + \theta_0))$?

☐ 0

☐ between 0 and 1

☐ 1

☒ 2

What is the hinge loss of point B, $\text{Loss}_h(y^{(b)}(\theta \cdot x^{(b)} + \theta_0))$?

☒ 0

☐ between 0 and 1


☐ 1

What is the hinge loss of point C, $\text{Loss}_h(y^{(c)}(\theta \cdot x^{(c)} + \theta_0))$?

☐ 0

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You have used 1 of 3 attempts

 Your answers were previously saved. Click 'Submit' to grade them.

Regularization

1/1 point (graded)

Remember that for points (x, y) on the boundary margin, the distance from the decision

$\frac{1}{||\theta||}$. Thus

$$y^{(i)}(\theta \cdot x^{(i)} + \theta_0) = 1.$$

And

$$\frac{y^{(i)}(\theta \cdot x^{(i)} + \theta_0)}{||\theta||} = \frac{1}{||\theta||}.$$

Now our goal is to maximize the margin, that is to maximize $\frac{1}{||\theta||}$. Which of the following is equivalent to maximizing $\frac{1}{||\theta||}$?

☐ maximizing $\frac{1}{||\theta||^2}$

☐ minimizing $||\theta||$

☒ maximizing $\sqrt{||\theta||}$



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You have used 1 of 2 attempts

Objective

0/1 point (graded)



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You have used 2 of 2 attempts

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