Nanoquiz Week 1

The questions below are due on Thursday February 15, 2018; 09:50:00 AM.

Nanoquiz Instructions

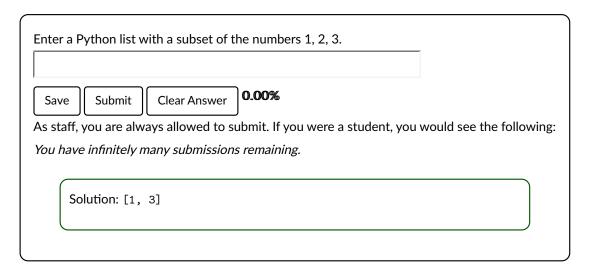
Nanoquizzes are just like any other tutor exercise, except that they are timed, and that some questions allow a limited number of submissions. When the timer hits zero, you will be prevented from making any further submissions to the nanoquiz, and the answers will be displayed, so **please make sure you have submitted something before that occurs**.

Note that you are free to use any materials you want (electronic or otherwise, including notes, calculators, Python, and Wikipedia) during the nanoquiz, but you are **not** allowed to converse with other humans (including through text message, email, etc).

1) POSITIVE

Consider a linear classifier through the origin in 2 dimensions, specified by $\theta = [3, -4]^T$. Which of the following points are classified as positive?

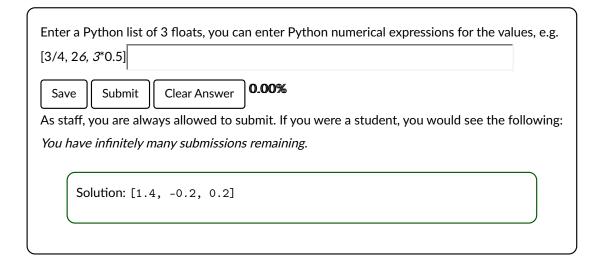
- 1. $[1, -1]^T$
- $\mathbf{2}.\,[1,1]^T$
- 3. $[-1, -1]^T$



2) DISTANCES

For the same θ and the points given in the previous question give the signed distances from the points to the hyperplane.

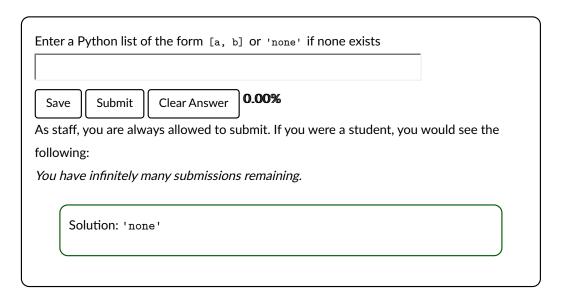
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3) SEPARABLE

Consider the following data set of four 2D points (a 2 by 4 array) and corresponding labels (1 by 4 array): X = [[2,2,1,3],[2,1,2,3]], y = [[+1,-1,-1,+1]].

1. Enter the components of heta for a separator through the origin (no offset) for this data set.



2. Enter the components of θ followed by θ_0 for a separator (with offset).

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Enter a Python list of the form [a, b, c] or 'none' if none exists

Save Submit Clear Answer 0.00%

As staff, you are always allowed to submit. If you were a student, you would see the following:

You have infinitely many submissions remaining.

Solution: 'There are many possible solutions. One of them is [1, 1, -3.5]'

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