

Quiz 5 Submission

Total points 4/4 ?

A score of 3/4 or 4/4 is required to be considered to have "passed" a quiz. Please do not resubmit a quiz if you obtain a score of 3/4. You don't receive a final grade at the end of the course, so it will have no bearing on your certificate!

Your quiz will be graded and returned to you within a few minutes in most cases. However, it may take up to three weeks for your work to be imported into your Gradebook. Do be patient, please!

Quizzes (which are submitted via Google Forms and not submit50) will not show up as submitted in your Gradebook, until the scores have been imported, and even then will only show up if you have received a passing score.

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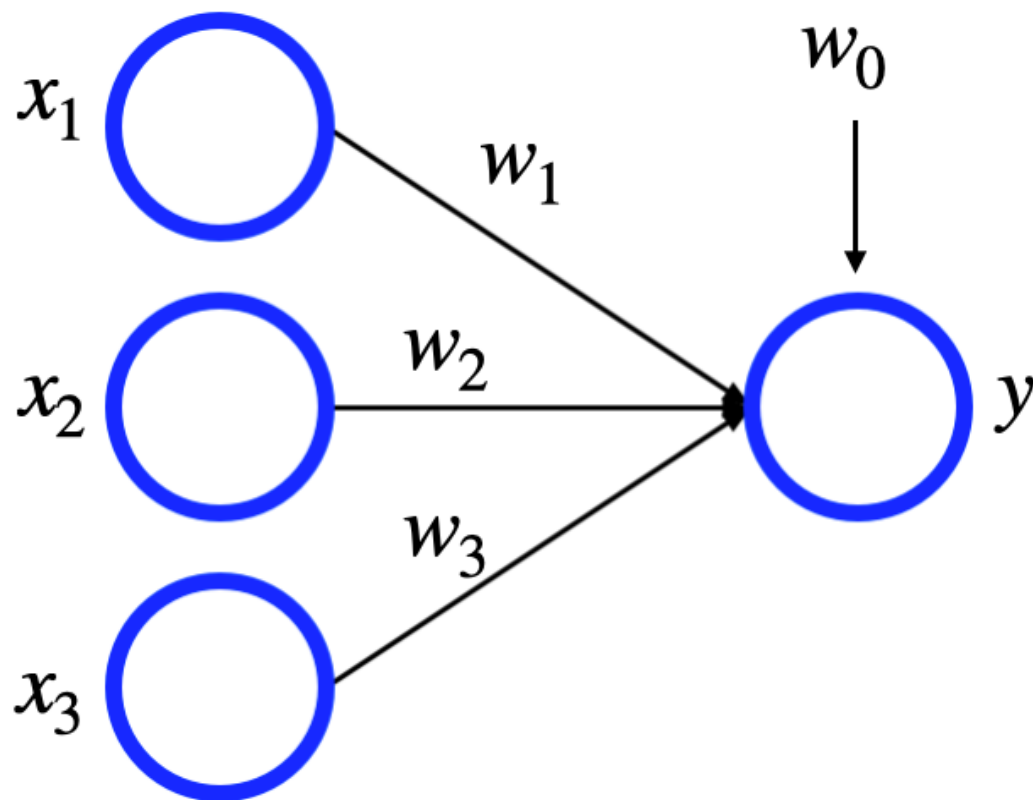
GitHub Username *

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City, State, Country

The following question will ask you about the below neural network, where we set $w_0 = -5$, $w_1 = 2$, $w_2 = -1$, and $w_3 = 3$. x_1 , x_2 , and x_3 represent input neurons, and y represents the output neuron.



✓ What value will this network compute for y given inputs $x_1 = 3$, $x_2 = 2$, and $x_3 = 4$ if we use a step activation function? What if we use a ReLU activation function? *1/1

- ☐ 0 for step activation function, 0 for ReLU activation function
- ☐ 0 for step activation function, 1 for ReLU activation function
- ☐ 1 for step activation function, 0 for ReLU activation function
- ☐ 1 for step activation function, 1 for ReLU activation function
- ☒ 1 for step activation function, 11 for ReLU activation function
- ☐ 1 for step activation function, 16 for ReLU activation function
- ☐ 11 for step activation function, 11 for ReLU activation function
- ☐ 16 for step activation function, 16 for ReLU activation function



✓ How many total weights (including biases) will there be for a fully connected neural network with a single input layer with 3 units, a single hidden layer with 5 units, and a single output layer with 4 units? *1/1

- ☐ 9
- ☐ 12
- ☐ 20
- ☐ 35
- ☐ 39
- ☐ 40
- ☒ 44
- ☐ 60
- ☐ 69



✓ Consider a recurrent neural network that listens to a audio speech sample, and classifies it according to whose voice it is. What network architecture is the best fit for this problem? *1/1

- ☐ Many-to-many (multiple inputs, multiple outputs)
- ☐ One-to-one (single input, single output)
- ☒ Many-to-one (multiple inputs, single output)
- ☐ One-to-many (single input, multiple outputs)



The following question will ask you about a 4x4 grayscale image with the following pixel values.

2	4	6	8
16	14	12	10
18	20	22	24
32	30	28	26

✓ What would be the result of applying a 2x2 max-pool to the original image? *1/1

Answers are formatted as a matrix $[[a, b], [c, d]]$ where $[a, b]$ is the first row and $[c, d]$ is the second row.

- ☒ $[[16, 12], [32, 28]]$
- ☐ $[[16, 14], [32, 30]]$
- ☐ $[[22, 24], [32, 30]]$
- ☐ $[[14, 12], [30, 28]]$
- ☐ $[[16, 14], [22, 24]]$
- ☐ $[[16, 12], [32, 30]]$



Comments, if any

This form was created inside CS50.

Google Forms

