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Practice quiz: Neural network implementation in Python

Graded Quiz • 10 min

Due Apr 9, 11:59 PM WIB

Congratulations! You passed!

Grade received 100% **Latest Submission Grade** 100% **To pass** 80% or higher

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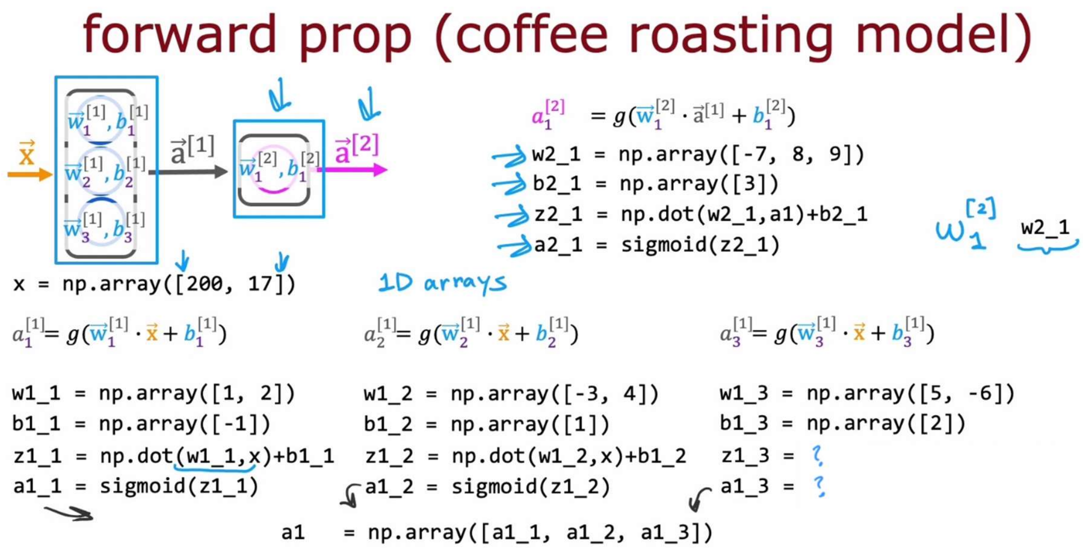
1.

1 / 1 point



According to the lecture, how do you calculate the activation of the third neuron in the first layer using NumPy?

- [ ] layer_1 = Dense(units=3, activation='sigmoid')

  a_1 = layer_1(x)

- [ ] z1_3 =w1_3 * x + b

  a1_3 = sigmoid(z1_3)

- [x] z1_3 = np.dot(w1_3, x) + b1_3

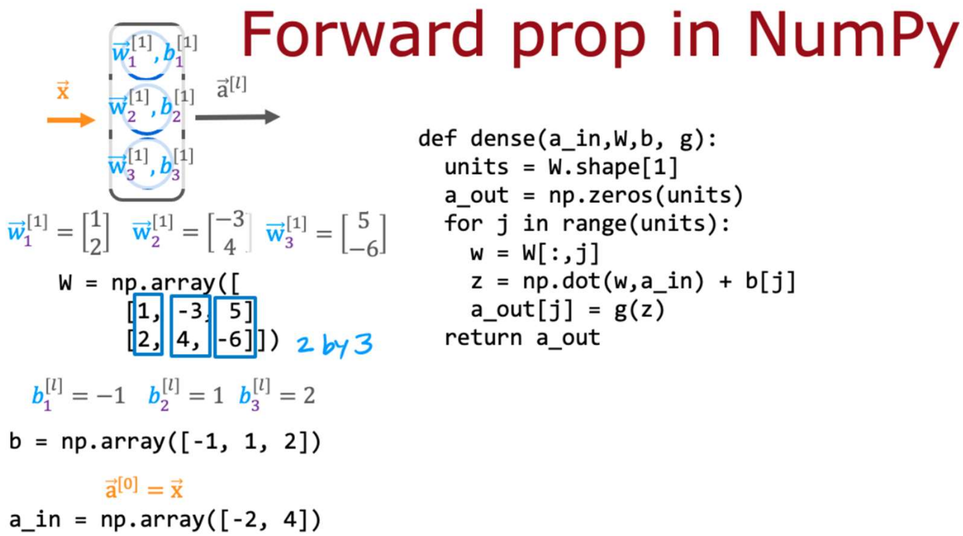
  a1_3 = sigmoid(z1_3)

Correct

Correct. Use the numpy.dot function to take the dot product. The sigmoid function shown in lecture can be a function that you write yourself (see course 1, week 3 of this specialization), and that will be provided to you in this course.

2.

1 / 1 point



According to the lecture, when coding up the numpy array W, where would you place the w parameters for each neuron?

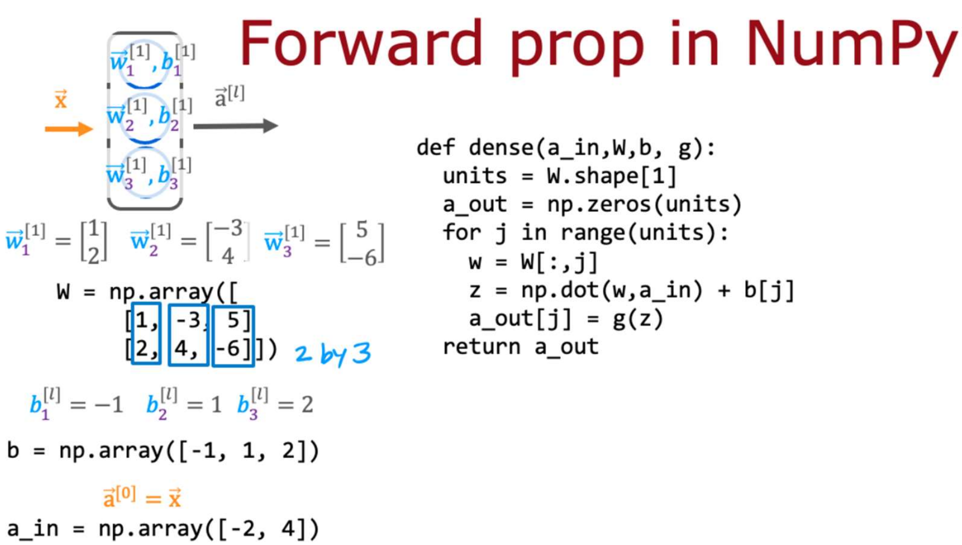
- (selected) In the columns of W.
- In the rows of W.

Correct

Correct. The w parameters of neuron 1 are in column 1. The w parameters of neuron 2 are in column 2, and so on.

3.

1 / 1 point



For the code above in the "dense" function that defines a single layer of neurons, how many times does the code go through the "for loop"? Note that W has 2 rows and 3 columns.

- (selected) 3 times
- 6 times
- 5 times
- 2 times

Correct

Yes! For each neuron in the layer, there is one column in the numpy array W. The for loop calculates the activation value for each neuron. So if there are 5 columns in W, there are 5 neurons in the dense layer, and therefore the for loop goes through 5 iterations (one for each neuron).