

Check Your Understanding

TOTAL POINTS 5

1. Which of the following code adds dropout regularization to a model using Keras' Functional API?

1 / 1 point

☒ `1 model.add(Dropout(0.5))`

☐ `1 model.add(Dense(128, activation="relu"))`

☐ `1 model.add(Dense(128, activation="dropout"))`

✓ **Correct**
Correct.

2. If you want to reshape a multi-dimensional array X of shape (10000, 28, 28) to a shape of (10000, 784), how would you do that using numpy?

1 / 1 point

☐ `1 X = numpy.reshape((10000, 784))`

☒ `1 X = numpy.reshape(X, (10000, 784))`

✓ **Correct**
Correct.

3. Which piece of code creates a classifier model that takes 100 dimensional vectors as input and predicts one of the three labels as output and has a regularization technique as well.

1 / 1 point

☒ `1 model = Sequential([
2 Dense(32, activation="relu", input_shape=(100,)), kernel_regularizer=l2(0.01
3]),
4 Dense(3, activation="softmax")
5])`

✓ **Correct**
Correct, we are using weight regularization in this code.

☒ `1 model = Sequential([
2 Dense(32, activation="relu", input_shape=(100,)),
3 Dropout(0.4),
4 Dense(3, activation="softmax")
5])`

✓ **Correct**
Correct, we are using dropout regularization in this code.

4. In the Fashion MNIST data-set , we converted each label from an integer to one hot encoded vectors. What was the dimension of these vectors? Enter only the integer value below:

1 / 1 point

10

✓ **Correct**
Correct! The integer classes are from 0 to 9 - i.e. a total of 10 classes. Therefore, each label's one hot encoded representation will be a 10 dimensional vector.

5. We used **model.fit** method on our Keras model in the project to train it. After the training is complete, this method returned a **history** object. For what purpose did we use this object?

1 / 1 point

- ☐ The history objects contains historical training data each time model.fit is called so that we can compare hyper-parameters.
- ☒ The history object contains training history of metrics like accuracy and loss for both training and validation sets.

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