

## Week 2 Quiz

LATEST SUBMISSION GRADE

100%

1. What is the correct syntax for the first layer in a convolutional neural network that takes an MNIST (28x28 monochrome) input?

1 / 1 point



```
1 model.add(tf.layers.conv2d(input_shape=[28, 28, 1], kernel_size=3, filters=8,
activation='relu'));
```



```
1 model.add(tf.layers.conv(input_shape=(28, 28, 1), kernel_size=3, filters=8,
activation='relu'));
```



```
1 model.add(tf.layers.conv2d(input_shape=[28, 28], kernel_size=3, filters=8,
activation='relu'));
2
```



```
1 model.add(tf.layers.conv(input_shape=[28, 28, 1], kernel_size=3, filters=8,
activation='relu'));
```

2. What is the correct syntax for adding a maxPooling2D layer to a Convolutional neural network in JavaScript?

1 / 1 point



```
1 model.add(tf.layers.maxPooling2D({poolSize = [2, 2]}));
```



```
1 model.add(tf.layers.maxPooling2d({poolSize: [2, 2]}));
```



```
1 model.add(tf.layers.maxPooling2D({poolSize: [2, 2]}));
```



```
1 model.add(tf.layers.maxPooling2d({poolSize = [2, 2]}));
```



Correct

3. What is the correct syntax for compiling a model with an optimizer, loss function and metrics?

1 / 1 point



```
1 model.compile({ optimizer: tf.train.adam(), loss: 'categoricalCrossentropy',  
  metrics: ['accuracy']});
```



```
1 model.compile({ optimizer: tf.train.adam(), loss: 'categoricalCrossentropy',  
  metrics: ['accuracy']});
```



```
1 model.compile({ tf.optimizer: tf.train.adam(), tf.loss:  
  'categoricalCrossentropy', tf.metrics: ['accuracy']});
```

4. How do you correctly pass a set of validation data called `testXs` and `testYs` to the `model.fit` method in JavaScript?

1 / 1 point

- ☐ Use `validationData = [testXs, testYs]` in the list of parameters to `model.fit`
- ☐ Use `validationData: [testXs, testYs]` in the list of parameters to `model.fit`
- ☒ Use `validationData: [testXs, testYs]` in the list of parameters sent as the third parameter to `model.fit`
- ☐ Use `validationData= [testXs, testYs]` and pass it to the `model.fit` method

✓ Correct

5. How do you get the built in callbacks visualizer with TensorFlow.js?

1 / 1 point

- ☐ Include the `tfjs-vis` script, call `show.fitCallbacks()` on the `tfvis` object
- ☐ Include the `tfjs-vis` script and it will work automatically
- ☒ Include the `tfjs-vis` script, set a callback in `model.fit`, and set it to a const that called `show.fitCallbacks()` on the `tfvis` object
- ☐ Include the `tfjs-vis` script, set a callback in `model.fit` and it will work automatically

✓ Correct

6. If you want to see loss, validation loss, accuracy and validation accuracy on each epoch while training, how do you do this?

1 / 1 point

- ☐ Create a list containing `[1, 1, 1, 1]` indicating that you want those 4 values to be true and pass it to the `fitCallbacks()` as a parameter
- ☐ Create a list setting `loss=true`, `val_loss=true`, `acc=true`, `val_acc=true`, and pass it to the `fitCallbacks()` as a parameter
- ☐ Create a list containing text values `["loss=true", "val_loss=true", "acc=true", "val_acc=true"]` and pass it to `fitCallbacks()` as a parameter
- ☒ Create a list containing text values with the names of the analytics you want to capture, i.e. `['loss', 'val_loss', 'acc', 'val_acc']` and pass it to `fitCallbacks()` as a parameter

- ☐ Create a list containing [1, 1, 1, 1] indicating that you want those 4 values to be true and pass it to the fitCallbacks() as a parameter
- ☐ Create a list setting loss=true, val\_loss=true, acc=true, val\_acc=true, and pass it to the fitCallbacks() as a parameter
- ☐ Create a list containing text values ["loss=true", "val\_loss=true", "acc=true", "val\_acc=true"] and pass it to fitCallbacks() as a parameter
- ☒ Create a list containing text values with the names of the analytics you want to capture, i.e. ['loss', 'val\_loss', 'acc', 'val\_acc'] and pass it to fitCallbacks() as a parameter

✓ Correct

7. When using a dataset like MNIST or FashionMNIST, why is it advisable to use a sprite sheet containing all the images?

1 / 1 point

- ☐ It doesn't require any additional pre-processing
- ☒ It prevents excessive multiple HTTP calls to download the data
- ☐ It makes the data more secure
- ☐ It keeps the data in the native JS format

✓ Correct

8. What is the role of tf.tidy() in TensorFlow.js?

1 / 1 point

- ☐ When it is executed it clears memory for new tensors
- ☐ It shuts down tensorflow when done, cleaning up all memory
- ☐ When it is executed, it removes everything tensorflow from the browser memory and cache
- ☒ When it is executed, it cleans up all intermediate tensors allocated by a function except those returned by the function

✓ Correct