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Deep Learning

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Machine Learning

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Week 3 Quiz

LATEST SUBMISSION GRADE

100%

1. If I put a dropout parameter of 0.2, how many nodes will I lose?

1 / 1 point

- ☒ 20% of them
- ☐ 2% of them
- ☐ 20% of the untrained ones
- ☐ 2% of the untrained ones

✓ Correct

2. Why is transfer learning useful?

1 / 1 point

- ☐ Because I can use all of the data from the original training set
- ☐ Because I can use all of the data from the original validation set
- ☒ Because I can use the features that were learned from large datasets that I may not have access to
- ☐ Because I can use the validation metadata from large datasets that I may not have access to

✓ Correct

3. How did you lock or freeze a layer from retraining?

1 / 1 point

- ☐ `tf.freeze(layer)`
- ☐ `tf.layer.frozen = true`
- ☐ `tf.layer.locked = true`
- ☒ `layer.trainable = false`

✓ Correct

4. How do you change the number of classes the model can classify when using transfer learning? (i.e. the original model handled 1000 classes, but yours handles just 2)

1 / 1 point

- ☐ Ignore all the classes above yours (i.e. Numbers 2 onwards if I'm just classing 2)
- ☐ Use all classes but set their weights to 0
- ☒ When you add your DNN at the bottom of the network, you specify your output layer with the number of classes you want
- ☐ Use dropouts to eliminate the unwanted classes

✓ Correct

5. Can you use Image Augmentation with Transfer Learning Models?

1 / 1 point

- ☐ No, because you are using pre-set features
- ☒ Yes, because you are adding new layers at the bottom of the network, and you can use image augmentation when training these

✓ Correct

6. Why do dropouts help avoid overfitting?

1 / 1 point

- ☒ Because neighbor neurons can have similar weights, and thus can skew the final training
- ☐ Having less neurons speeds up training

✓ Correct

7. What would the symptom of a Dropout rate being set too high?

1 / 1 point

- ☒ The network would lose specialization to the effect that it would be inefficient or ineffective at learning, driving accuracy down
- ☐ Training time would increase due to the extra calculations being required for higher dropout

✓ Correct

8. Which is the correct line of code for adding Dropout of 20% of neurons using TensorFlow

1 / 1 point

- ☐ `tf.keras.layers.Dropout(20)`
- ☐ `tf.keras.layers.DropoutNeurons(20),`
- ☒ `tf.keras.layers.Dropout(0.2),`
- ☐ `tf.keras.layers.DropoutNeurons(0.2),`

✓ Correct