✓ **Congratulations! You passed!**

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

Go to next item

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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**
    Spot on!

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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**
    Exactly!

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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**
    Well done!

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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**
    Good job!

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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**
    Correct!

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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**
    That's right!

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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**
    Indeed!

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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**
You've got it!

○ tf.keras.layers.DropoutNeurons(0.2),

✓ **Correct**
You've got it!