

Graded quiz C1W4

✓ **Congratulations! You passed!**

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

1. Using Image Generator, how do you label images?

- ☐ TensorFlow figures it out from the contents
- ☐ It's based on the file name
- ☐ You have to manually do it
- ☒ It's based on the directory the image is contained in

✓ **Correct**

That's right! The directory of the image is the label.

2. What method on the Image Generator is used to normalize the image?

- ☐ normalize\_image
- ☒ rescale
- ☐ normalize
- ☐ Rescale\_image

✓ **Correct**

You've got it! This is the correct method for normalizing images.

3. How did we specify the training size for the images?

- ☐ The target\_size parameter on the validation generator
- ☐ The training\_size parameter on the training generator
- ☒ The target\_size parameter on the training generator
- ☐ The training\_size parameter on the validation generator

✓ **Correct**

Exactly! target\_size specifies the image training size

4. When we specify the input\_shape to be (300, 300, 3), what does that mean?

- ☐ Every Image will be 300x300 pixels, and there should be 3 Convolutional Layers
- ☒ Every Image will be 300x300 pixels, with 3 bytes to define color
- ☐ There will be 300 images, each size 300, loaded in batches of 3
- ☐ There will be 300 horses and 300 humans, loaded in batches of 3

✓ **Correct**

Nailed it! input\_shape specifies image resolution.

5. If your training data is close to 1.000 accuracy, but your validation data isn't, what's the risk here?

- ☐ You're overfitting on your validation data
- ☐ No risk, that's a great result
- ☐ You're underfitting on your validation data
- ☒ You're overfitting on your training data

✓ **Correct**

Great job! The analysis corresponds too closely to the training data, and may therefore fail to fit additional data.

6. Convolutional Neural Networks are better for classifying images like horses and humans because:

✓ In these images, the features may be in different parts of the frame

✓ **Correct**

Correct! The receptive fields of different neurons partially overlap such that they cover the entire visual field.

✓ There's a wide variety of horses

✓ **Correct**

Way to go! CNNs are better in this case as they are independent from prior knowledge and human intervention in feature extraction.

✓ There's a wide variety of humans

✓ **Correct**

You've got it! CNNs are better in this case as they are independent from prior knowledge and human intervention in feature extraction.

7. After reducing the size of the images, the training results were different. Why?

- ☐ There was less information in the images
- ☒ We removed some convolutions to handle the smaller images
- ☐ There was more condensed information in the images
- ☐ The training was faster

✓ **Correct**

Yes! Removing some convolutions modifies the training results.