

Transfer Learning

Video: A conversation with Andrew Ng

3 min

Video: Understanding transfer learning: the concepts

2 min

Reading: Start coding!

10 min

Video: Coding transfer learning from the inception mode

1 min

Reading: Adding your DNN

10 min

Video: Coding your own model with transferred features

2 min

Reading: Using dropouts!

10 min

Video: Exploring dropouts

1 min

Reading: Applying Transfer Learning to Cats v Dogs

10 min

Video: Exploring Transfer Learning with Inception

1 min

Reading: What have we seen so far?

10 min

Quiz: Week 3 Quiz

8 questions

Video: Week 3 Wrap up

36 sec

Weekly Exercise- Transfer Learning

Optional: Ungraded Google Colaboratory environment

Congratulations! You passed!

QUIZ • 30 MIN

TO PASS 80% or higher

Keep Learning

GRADE 100%

Week 3 Quiz

Week 3 Quiz

LATEST SUBMISSION GRADE 100%

Submit your assignment

Try again

DUE DATE Aug 17, 12:29 PM IST

ATTEMPTS 3 every 8 hours

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

Receive grade

TO PASS 80% or higher

Grade 100%

View Feedback

We keep your highest score

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