Week 1 Quiz

The diagram for traditional programming had Rules and Data In, but what came out?

Bugs

Machine Learning

Binary

Answers

The diagram for Machine Learning had Answers and Data In, but what came out?

Bugs

Rules

Binary

Models

When I tell a computer what the data represents (i.e. this data is for walking, this data is for running), what is that process called?
Learning the Data

Labelling the Data

Programming the Data

Categorizing the Data

What is a Dense?

A layer of connected neurons

Mass over Volume

A single neuron

A layer of disconnected neurons

What does a Loss function do?

Generates a guess

Measures how good the current 'guess' is

Decides to stop training a neural network

Figures out if you win or lose

What does the optimizer do?

Figures out how to efficiently compile your code

Measures how good the current guess is

Decides to stop training a neural network

Generates a new and improved guess

What is Convergence?

The bad guys in the next ‘Star Wars’ movie

A dramatic increase in loss

The process of getting very close to the correct answer

A programming API for AI

What does model.fit do?

It trains the neural network to fit one set of values to another

It makes a model fit available memory

It determines if your activity is good for your body

It optimizes an existing model

Week 2 Quiz

What’s the name of the dataset of Fashion images used in this week’s code?

Fashion Tensors

Fashion MN

Fashion Data

Fashion MNIST

What do the above mentioned Images look like?

28x28 Color

100x100 Color

28x28 Greyscale

82x82 Greyscale

How many images are in the Fashion MNIST dataset?

70,000

60,000

10,000

42

Why are there 10 output neurons?

To make it classify 10x faster

To make it train 10x faster

There are 10 different labels

Purely arbitrary

What does Relu do?

It only returns x if x is greater than zero

It returns the negative of x

For a value x, it returns 1/x

It only returns x if x is less than zero

Why do you split data into training and test sets?

To make training quicker

To train a network with previously unseen data

To test a network with previously unseen data

To make testing quicker

What method gets called when an epoch finishes?

on_end

On_training_complete

on_epoch_end

on_epoch_finished

What parameter to you set in your fit function to tell it to use callbacks?

callback=

oncallback=

callbacks=

oncallbacks=

Week 3 Quiz

What is a Convolution?

A technique to make images smaller

A technique to filter out unwanted images

A technique to make images bigger

A technique to isolate features in images

What is a Pooling?

A technique to combine pictures

A technique to isolate features in images

A technique to make images sharper

A technique to reduce the information in an image while maintaining features

How do Convolutions improve image recognition?

They make processing of images faster

They isolate features in images

They make the image smaller

They make the image clearer

After passing a 3x3 filter over a 28x28 image, how big will the output be?

31x31

28x28

25x25

26x26

After max pooling a 26x26 image with a 2x2 filter, how big will the output be?

13x13

28x28

26x26

56x56

Applying Convolutions on top of our Deep neural network will make training:

It depends on many factors. It might make your training faster or slower, and a poorly designed

Convolutional layer may even be less efficient than a plain DNN!

Faster

Stay the same

Slower

Week 4 Quiz

Using Image Generator, how do you label images?

TensorFlow figures it out from the contents

It's based on the file name

It's based on the directory the image is contained in

You have to manually do it

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

normalize

rescale

Rescale_image

normalize_image

How did we specify the training size for the images?

The target_size parameter on the training generator

The training_size parameter on the training generator

The training_size parameter on the validation generator

The target_size parameter on the validation generator

When we specify the input_shape to be (300, 300, 3), what does that mean?

There will be 300 images, each size 300, loaded in batches of 3

Every Image will be 300x300 pixels, with 3 bytes to define color

Every Image will be 300x300 pixels, and there should be 3 Convolutional Layers

There will be 300 horses and 300 humans, loaded in batches of 3

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 training data

You’re underfitting on your validation data You’re overfitting on your validation data No risk, that’s a great result
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 There’s a wide variety of horses There’s a wide variety of humans **All of the above**
After reducing the size of the images, the training results were different. Why? There was more condensed information in the images There was less information in the images **We removed some convolutions to handle the smaller images** The training was faster