Congratulations! You passed!

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1. What is the difference between traditional programming and Machine Learning? **1 / 1 point**

- (●) In traditional programming, a programmer has to formulate or code rules manually, whereas, in Machine Learning, the algorithm automatically formulates the rules from the data.
- ( ) Machine learning identifies complex activities such as golf, while traditional programming is better suited to simpler activities such as walking.

Correct
Exactly! Machine learning algorithms build a model based on sample data, known as "training data", in order to make predictions or decisions without being explicitly programmed to do so.

2. What do we call the process of telling the computer what the data represents (i.e. this data is for walking, this data is for running)? **1 / 1 point**

- (●) Labelling the Data
- ( ) Programming the Data
- ( ) Categorizing the Data
- ( ) Learning the Data

Correct
Yes! Labeling typically takes a set of unlabeled data and augments each piece of it with informative tags.

3. What is a Dense layer? **1 / 1 point**

- ( ) An amount of mass occupying a volume
- ( ) A layer of disconnected neurons
- ( ) A single neuron
- (●) A layer of connected neurons

Correct
Correct! In Keras, dense is used to define a layer of connected neurons.

4. How do you measure how good the current 'guess' is? **1 / 1 point**

- (●) Using the Loss function
- ( ) Figuring out if you win or lose
- ( ) Training a neural network

Correct
Absolutely! An optimization problem seeks to minimize a loss function.

5. What does the optimizer do? **1 / 1 point**

- ( ) Decides to stop training a neural network
- ( ) Measures how good the current guess is
- (●) Generates a new and improved guess
- ( ) Figures out how to efficiently compile your code

Correct
Nailed it! The optimizer figures out the next guess based on the loss function.

6. What is Convergence? **1 / 1 point**

- ○ A programming API for AI
- ◉ The process of getting very close to the correct answer
- ○ A dramatic increase in loss
- ○ An analysis that corresponds too closely or exactly to a particular set of data.

Correct
That's right! Convergence is when guesses get better and better closing to a 100% accuracy.

7. What does model.fit do? **1 / 1 point**

- ○ It optimizes an existing model
- ◉ 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

Correct
Correct! The training takes place on the fit command.