✅ **Congratulations! You passed!**

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

Go to next item

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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`

   - ◯ Categorizing the Data

   - ◯ Learning the Data

   - ◯ Programming the Data

   - ⦿ Labelling 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`

   - ◯ A layer of disconnected neurons

   - ⦿ A layer of neurons fully connected to its adjacent layers

   - ◯ A single neuron

   - ◯ An amount of mass occupying a volume

   ✓ **Correct**
   Correct! In Keras, dense is used to define this layer of connected neurons

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

   - ⦿ Using the Loss function

   - ◯ Training a neural network

   - ◯ Figuring out if you win or lose

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

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

   - ⦿ Generates a new and improved guess

   - ◯ Measures how good the current guess is

   - ◯ Figures out how to efficiently compile your code

   - ◯ Decides to stop training a neural network

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

6. What is Convergence?

○ A dramatic increase in loss

● The process of getting very close to the correct answer

○ A programming API for AI

○ 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?

○ It makes a model fit available memory

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

○ It determines if your activity is good for your body

○ It optimizes an existing model

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