Introduction to Deep Learning
Graded Quiz • 50 min

Congratulations! You passed!

Grade received 100%

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1. Which of the following are some aspects in which AI has transformed business? 1 / 1 point

Expand

Correct
Yes. AI has helped to make a fit between services or results and consumers or queries.

2. Which of the following are reasons that didn't allow Deep Learning to be developed during the '80s? 1 / 1 point

- [ ] The theoretical tools didn't exist during the 80's.
- [x] Limited computational power.

Correct
Yes. Deep Learning methods need a lot of computational power, and only recently the use of GPUs has accelerated the experimentation with Deep Learning.

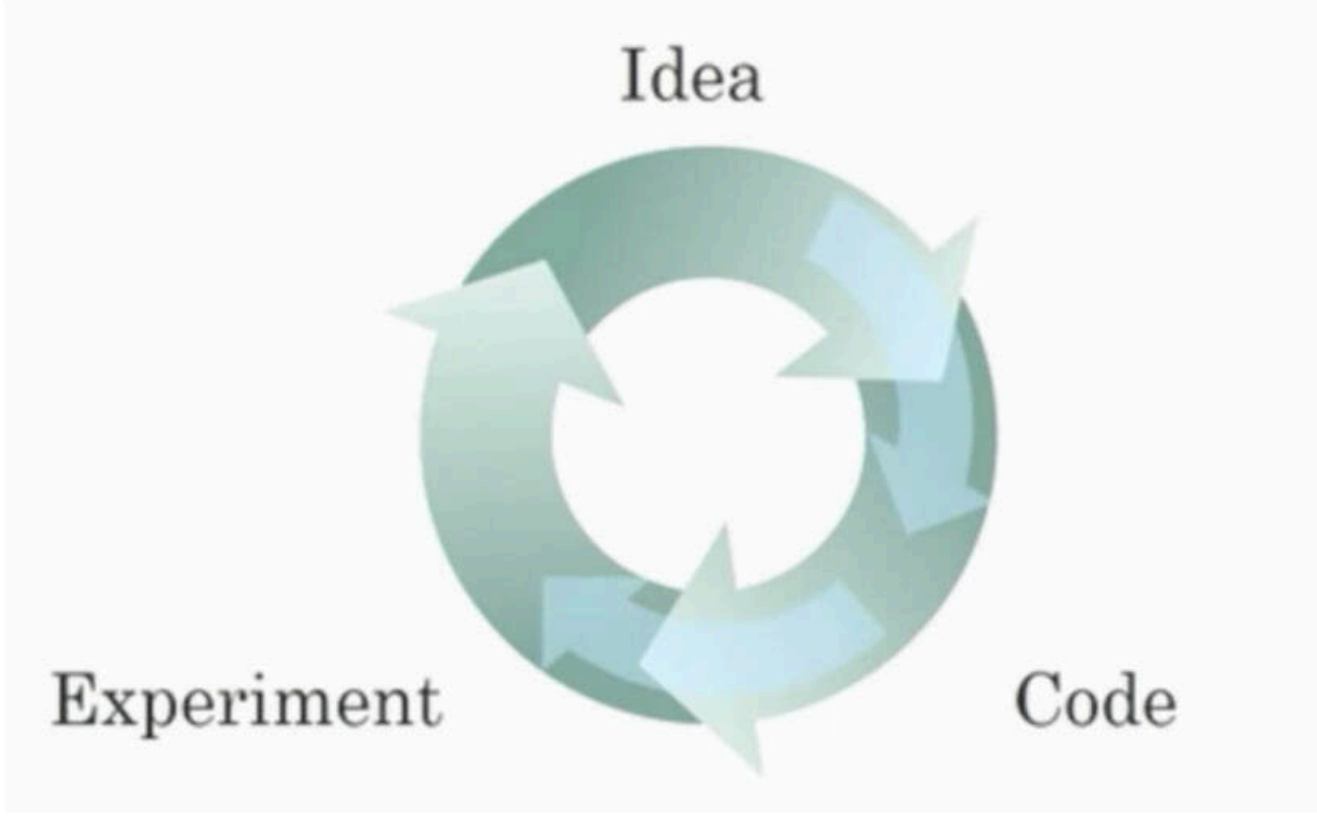
- [ ] People were afraid of a machine rebellion.
- [x] Interesting applications such as image recognition require large amounts of data that were not available.

Correct
Yes. Many resources used today to train Deep Learning projects come from the fact that our society digitizes almost everything, creating a large dataset to train Deep Learning models.

Expand

Correct
Great, you got all the right answers.

3. Recall this diagram of iterating over different ML ideas. Which of the statements below are true? (Check all that apply.) 1 / 1 point



- [x] Better algorithms can speed up the iterative process by reducing the necessary computation time.

  Correct

  Yes. Recall how the introduction of the ReLU activation function helped reduce the time needed to train a model.

- [ ] Larger amounts of data allow researchers to try more ideas and then produce better algorithms in less time.
- [x] Improvements in the GPU/CPU hardware enable the discovery of better Deep Learning algorithms.

  Correct

  Yes. By speeding up the iterative process, better hardware allows researchers to discover better algorithms.

- [ ] Better algorithms allow engineers to get more data and then produce better Deep Learning models.

Expand

Correct

Great, you got all the right answers.

4. When building a neural network to predict housing price from features like size, the number of bedrooms, zip code, and wealth, it is necessary to come up with other features in between input and output like family size and school quality. True/False?

1 / 1 point

- (●) False
- ( ) True

Expand

Correct
A neural network figures out by itself the "features" in between using the samples used to train it.

5. ReLU stands for which of the following? 1 / 1 point

- Representation Linear Unit
- Recognition Linear Unit
- Rectified Last Unit
- Rectified Linear Unit

Expand

Correct
Correct, ReLU stands for Rectified Linear Unit.

6. Images for cat recognition is an example of “structured” data, because it is represented as a structured array in a computer. True/False? 1 / 1 point

- ○ True
- ◉ False

Expand

Correct
Yes. Images for cat recognition are examples of “unstructured” data.

7. A demographic dataset with statistics on different cities' population, GDP per capita, and economic growth is an example of “unstructured” data because it contains data coming from different sources. True/False? 1 / 1 point

- ○ True
- ◉ False

Expand

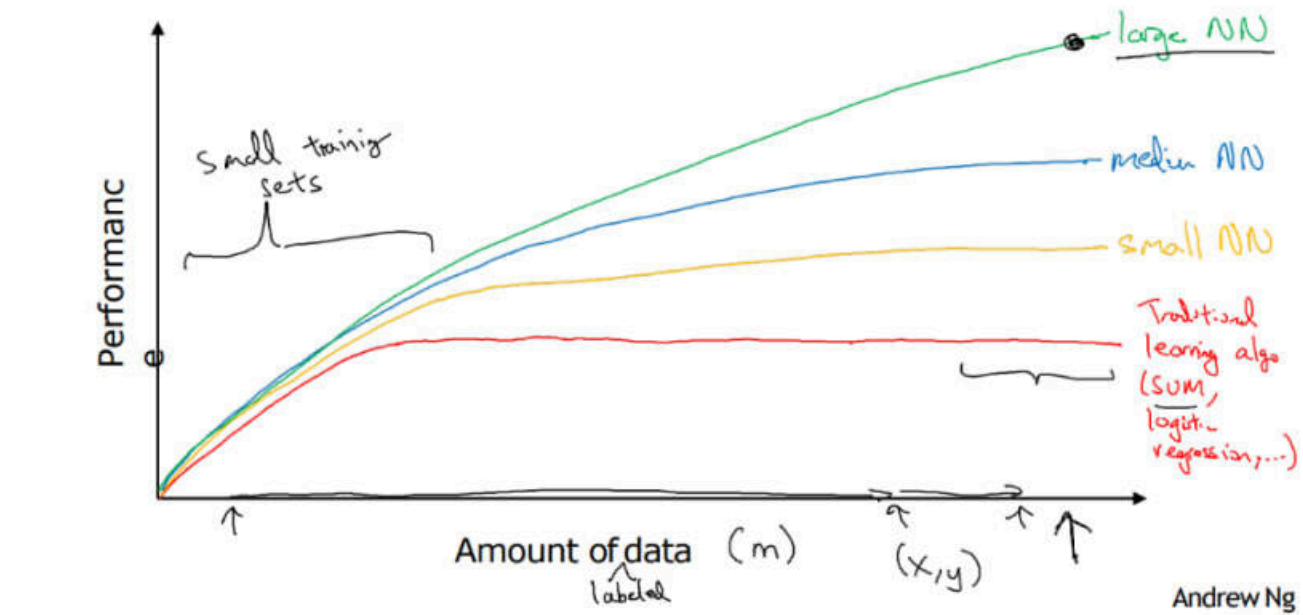
Correct
A demographic dataset with statistics on different cities' population, GDP per capita, and economic growth is an example of “structured” data in contrast to image, audio or text datasets.

8. RNNs (Recurrent Neural Networks) are good for data with a temporal component. True/False? 1 / 1 point

- False
- True

Expand

Correct
Yes, RNN are designed to work with sequences; the elements of a sequence can be sorted by a temporal component.



9. From the given diagram, we can deduce that Large NN models are always better than traditional learning algorithms. True/False? 1 / 1 point

- (●) False
- ( ) True

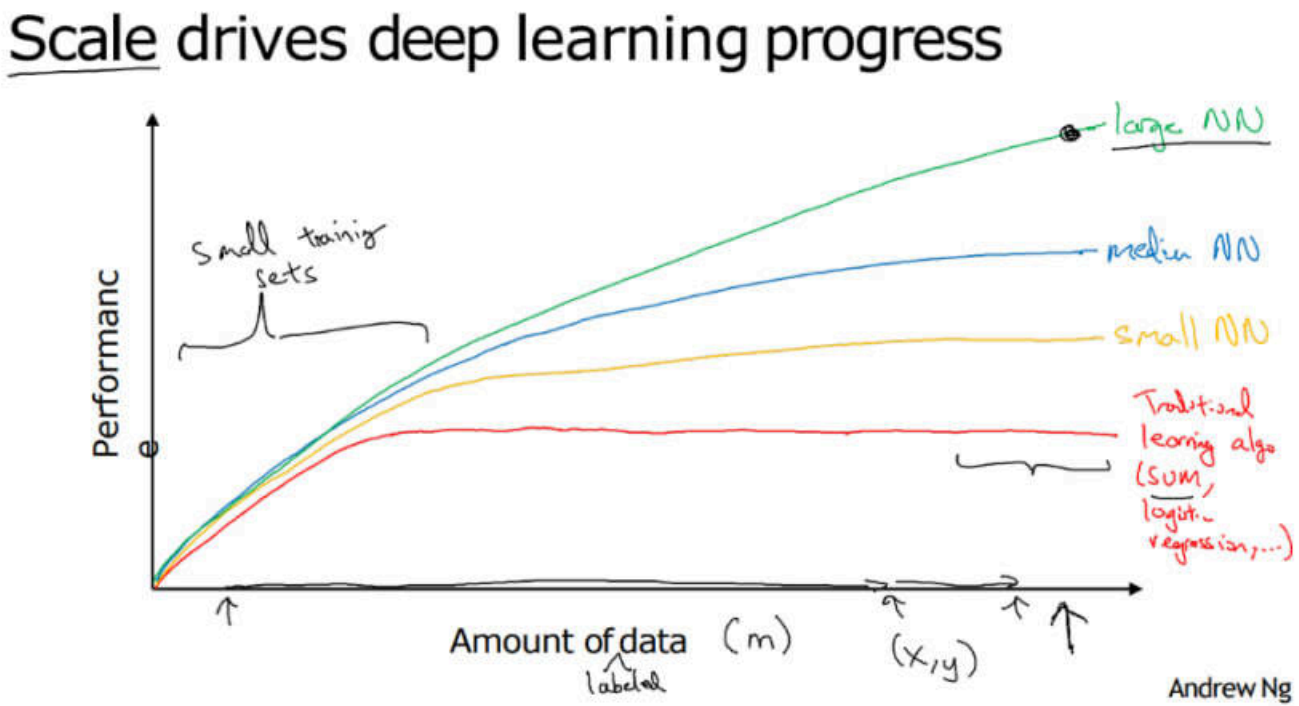
9. From the given diagram, we can deduce that Large NN models are always better than traditional learning algorithms. True/False? 1 / 1 point

- (●) False
- ( ) True

Expand

Correct
Yes, when the amount of data is not large the performance of traditional learning algorithms is shown to be the same as NN.

10. Assuming the trends described in the figure are accurate. Which of the following statements are true? Choose all that apply. 1 / 1 point



- [ ] Decreasing the training set size generally does not hurt an algorithm's performance, and it may help significantly.
- [x] Increasing the training set size of a traditional learning algorithm stops helping to improve the performance after a certain size.

Correct
Yes. After a certain size, traditional learning algorithms don't improve their performance.

- [ ] Increasing the training set size of a traditional learning algorithm always improves its performance.
- [x] Increasing the size of a neural network generally does not hurt an algorithm's performance, and it may help significantly.

Correct
Yes. According to the trends in the figure above, big networks usually perform better than small networks.

Expand

Correct
Great, you got all the right answers.