

# Your grade: 98%

Your latest: **98%** • Your highest: **98%**

To pass you need at least 80%. We keep your highest score.

Next item →

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

1 / 1 point

- AI has not been able to transform businesses.
- Eliminating the need for health care services.
- Creating an AI-powered society.
- Web searching and advertisement.

⌚ **Correct**

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

2. Which of the following play a major role to achieve a very high level of performance with Deep Learning algorithms?

0.8 / 1 point

- Deep learning has resulted in significant improvements in important applications such as online advertising, speech recognition, and image recognition.
- Smaller models.
- Better designed features to use.
- Large amounts of data.

**Correct**

Yes. Some of the most successful Deep Learning algorithms make use of very large datasets for training.

- Large models.

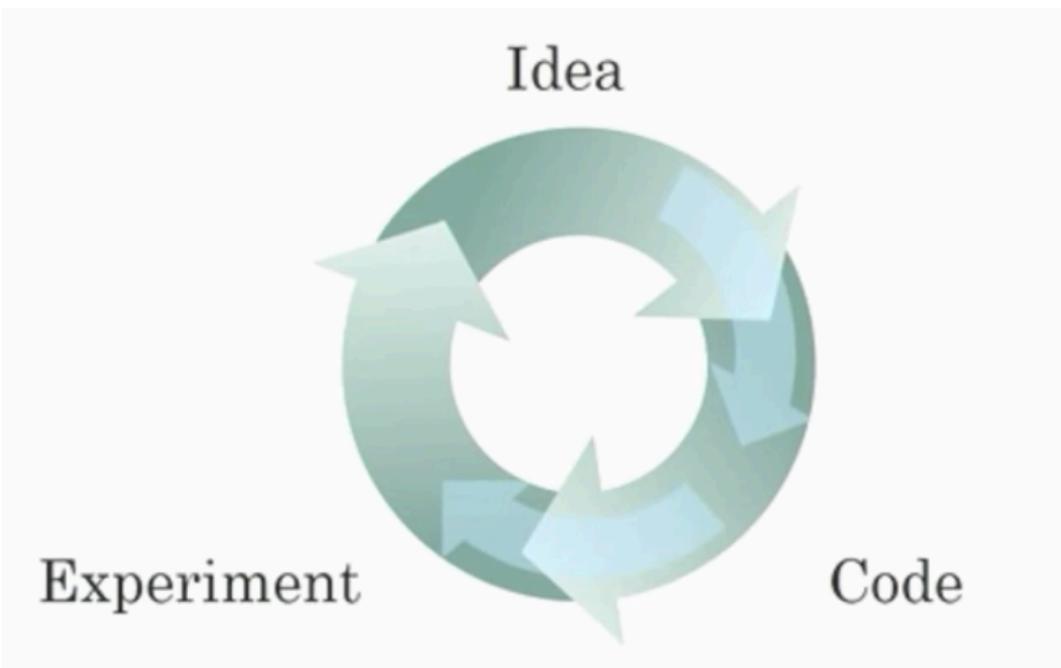
 **Correct**

Yes. In most cases it is necessary for a very large neural network to make use of all the available data.

You didn't select all the correct 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



- Being able to try out ideas quickly allows deep learning engineers to iterate more quickly.

 **Correct**

Yes, as discussed in Lecture 4.

- It is faster to train on a big dataset than a small dataset.
- Recent progress in deep learning algorithms has allowed us to train good models faster (even without changing the CPU/GPU hardware).

**Correct**

Yes. For example, we discussed how switching from sigmoid to ReLU activation functions allows faster training.

- Faster computation can help speed up how long a team takes to iterate to a good idea.

**Correct**

Yes, as discussed in Lecture 4.

4. When experienced deep learning engineers work on a new problem, they can usually use insight from previous problems to train a good model on the first try, without needing to iterate multiple times through different models.

1 / 1 point

True/False?

False

True

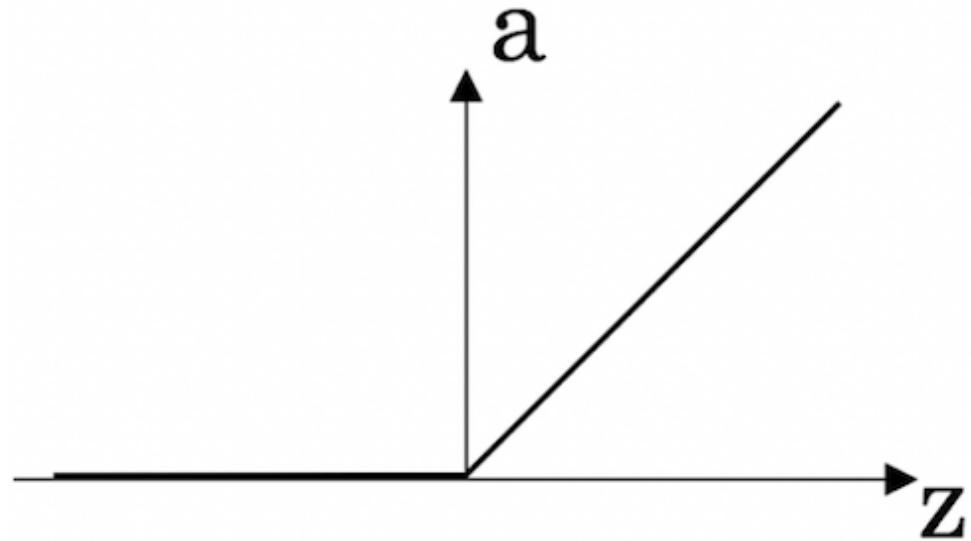
**Correct**

Yes. Finding the characteristics of a model is key to having good performance. Although experience can help, it requires multiple iterations to build a good model.

5. Which one of these plots represents a ReLU activation function?

1 / 1 point

● Figure 3:



○ Figure 1:

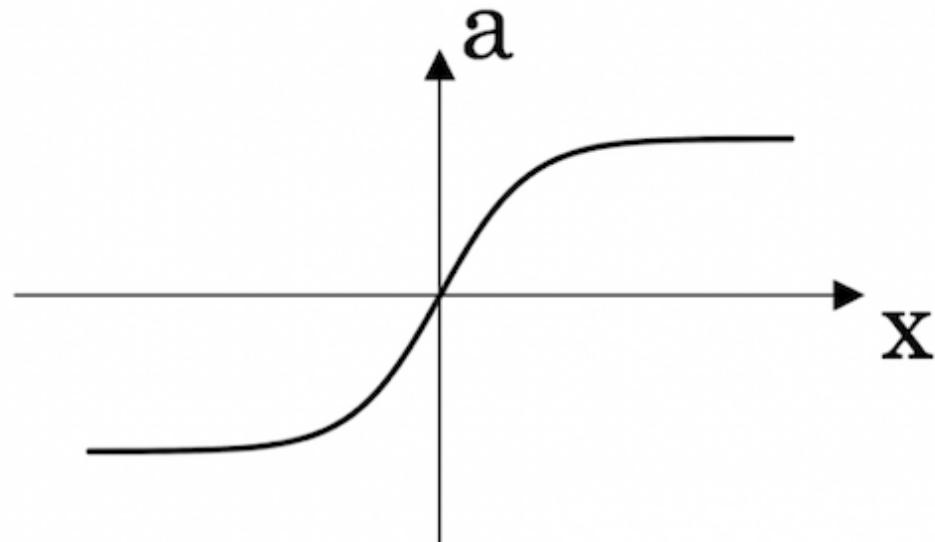
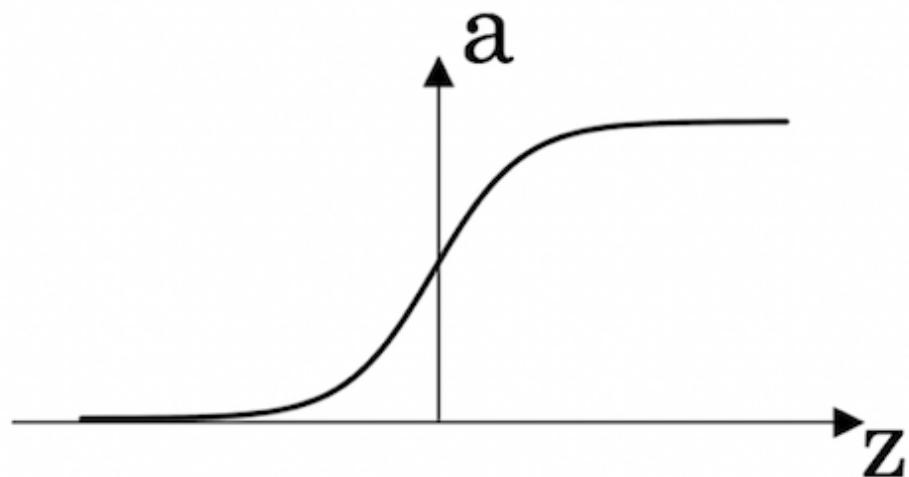
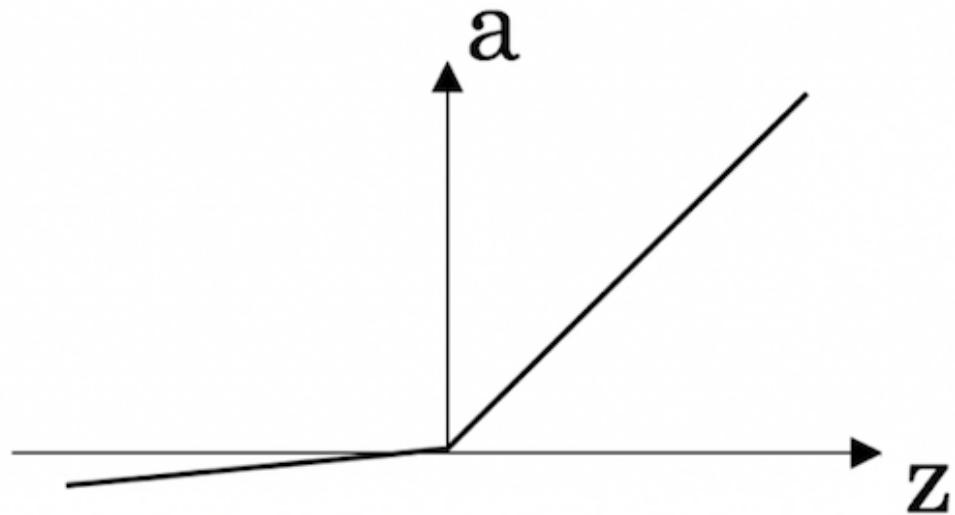


Figure 2: Figure 4:

**Correct**

Correct! This is the ReLU activation function, the most used in neural networks.

6. Features of animals, such as weight, height, and color, are used for classification between cats, dogs, or others. This is an example of

1 / 1 point

"structured" data, because they are represented as arrays in a computer.

True/False?

True

Yes. The data can be represented by columns of data. This is an example of structured data, unlike images of the animal.

False

No. The data can be represented by columns of data. This is an example of structured data, unlike images of the animal.

**Correct**

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

False

True

**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. Why can an RNN (Recurrent Neural Network) be used to create English captions to French movies? Choose all that apply. 1 / 1 point

It can be trained as a supervised learning problem.

**Correct**

Yes, the data can be used as x (movie audio) to y (caption text).

- The RNN is applicable since the input and output of the problem are sequences.

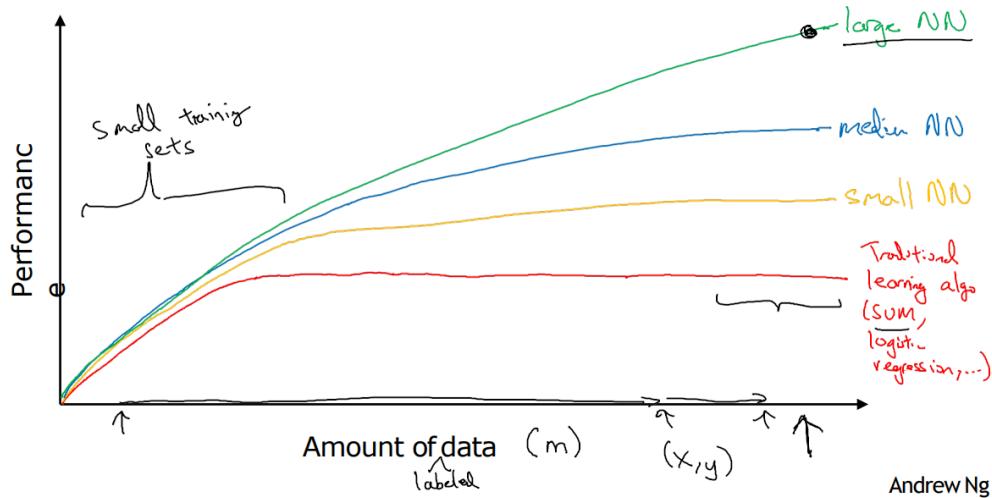
**Correct**

Yes, an RNN can map from a sequence of sounds (or audio files) to a sequence of words (the caption).

- RNNs are much more powerful than a Convolutional neural Network (CNN).
- The RNN requires a small number of examples.

## Scale drives deep learning progress

1 / 1 point



9. Suppose the information given in the diagram is accurate. We can deduce that when using large training sets, for a model to keep improving as the amount of data for training grows, the size of the neural network must grow. True/False?

False

True

**Correct**

Yes, the graph shows that after a certain amount of data is fed to a NN it stops increasing its performance. To increase the performance it is necessary to use a larger model.

10. Assuming the trends described in the previous question's figure are accurate (and hoping you got the axis labels right), which of the following are true? (Check all that apply.)

- Decreasing the size of a neural network generally does not hurt an algorithm's performance, and it may help significantly.
- Decreasing the training set size generally does not hurt an algorithm's performance, and it may help significantly.
- Increasing the training set size generally does not hurt an algorithm's performance, and it may help significantly.

ⓘ **Correct**

Yes. Bringing more data to a model is almost always beneficial.

- 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.