

Quiz

✓ **Congratulations! You passed!**

Grade
received **90%**

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To pass 80% or
higher

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

1 / 1 point

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

[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?

0 / 1 point

- ☒ 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.

- ☒ 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.

- ☒ The theoretical tools didn't exist during the 80's.

! **This should not be selected**

No. The basic theoretical component for deep learning models, the neural network, is a tool known from decades ago.

- ☐ People were afraid of a machine rebellion.

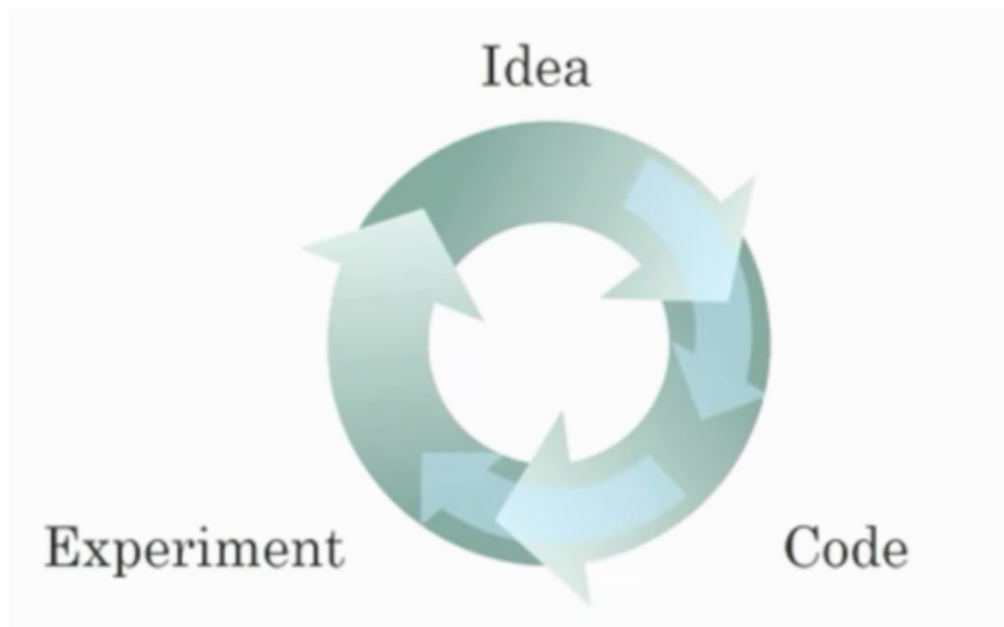
↗ **Expand**

✗ **Incorrect**

You chose the extra incorrect answers.

3. Recall the diagram of iterating over different ML ideas. Which of the stages shown in the diagram was improved with the use of a better GPU/CPU?

1 / 1 point



- ☐ With larger datasets, the iteration process is faster.
- ☒ Some algorithms are specifically designed to run experiments faster.

✓ Correct

Yes. Some algorithms look specifically to improve the time needed to run an experiment and thus enable us to produce better models.

- ☐ Without better hardware, there is no way to train models faster.
- ☒ Experiments finish faster, producing better ideas through increased iteration tempo.

✓ Correct

Yes. The experiments help to test ideas, by getting the feedback from the experiments new variations can be tested and the results might indicate new directions to explore.

[Expand](#)

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. True/False?

1 / 1 point

- ☐ True
- ☒ False

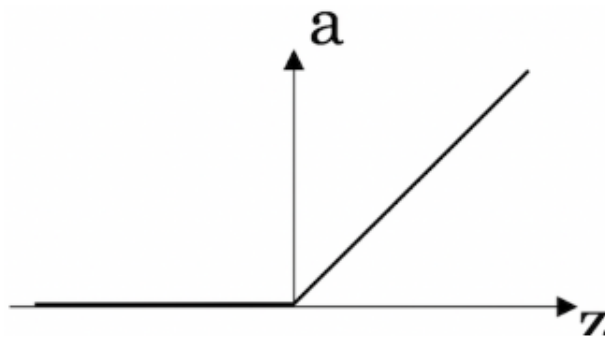
[Expand](#)

✓ **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



[Expand](#)

✓ **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 "structured" data, because they are represented as arrays in a computer. True/False?

1 / 1 point

- ☐ False
- No. The data can be represented by columns of data. This is an example of structured data, unlike images of the animal.
- ☒ True
- Yes. The data can be represented by columns of data. This is an example of structured data, unlike images of the animal.

7. Which of the following are examples of structured data? Choose all that apply.

1 / 1 point

☒ A dataset of weight, height, age, the sugar level in the blood, and arterial pressure.

✓ Correct

Yes, this data can be presented in a table. This is an example of "structured" data.

☐ A set of audio recordings of a person saying a single word.

☒ A dataset with zip code, income, and name of a person.

✓ Correct

Yes, this data can be presented in a table. This is an example of "structured" data.

☐ A dataset with short poems.

↗ Expand

✓ Correct

Great, you got all the right answers.

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

1 / 1 point

☐ False

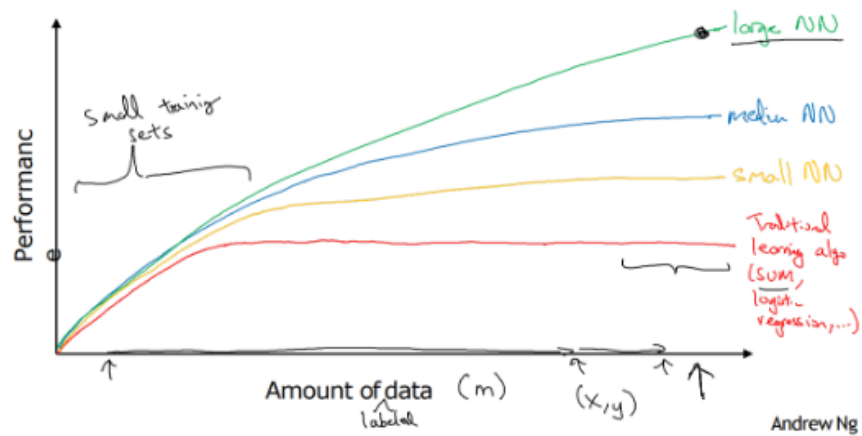
☒ True

↗ Expand

✓ Correct

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

Scale drives deep learning progress



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

[Expand](#)

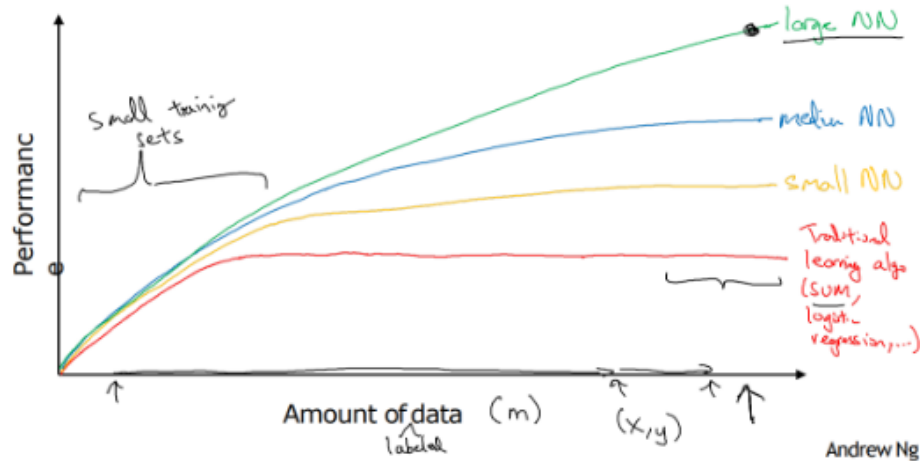
✓ Correct

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 figure are accurate. Which of the following statements are true? Choose all that apply.

1 / 1 point

Scale drives deep learning progress



- ☒ 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.

- ☐ Decreasing the training set size generally does not hurt an algorithm's performance, and it may help significantly.
- ☐ Increasing the training set size of a traditional learning algorithm always improves its performance.
- ☒ 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.

↗ Expand

✓ Correct

Great, you got all the right answers.