

## ✓ Congratulations! You passed!

Grade  
received **90%**

Latest Submission  
Grade 90%

To pass 80% or  
higher

[Go to next item](#)

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

1 / 1 point

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

[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

- ☒ 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.

- ☒ 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.

- ☒ 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.

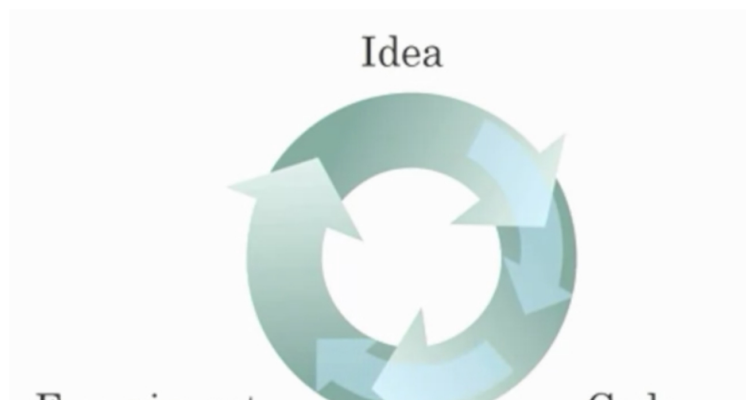
[Expand](#)

✗ **Incorrect**

You chose the extra incorrect 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



- ☒ 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.

- ☒ 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.

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

✓ **Correct**

Yes, as discussed in Lecture 4.

↗ **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

☐ Rectified Last Unit

☐ Recognition Linear 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

☒ False

☐ True

Expand



Correct

Yes. Images for cat recognition are examples of "unstructured" data.

7. A dataset is composed of age and weight data for several people. This dataset is an example of "structured" data because it is represented as an array in a computer. True/False?

1 / 1 point

☒ True

☐ False

Expand



Correct

Yes, the sequences can be represented as arrays in a computer. This is an example of structured data.

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

1 / 1 point

☒ 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).

☐ The RNN requires a small number of examples.

☐ RNNs are much more powerful than a Convolutional neural Network (CNN).

☒ It can be trained as a supervised learning problem.



Correct

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

Expand



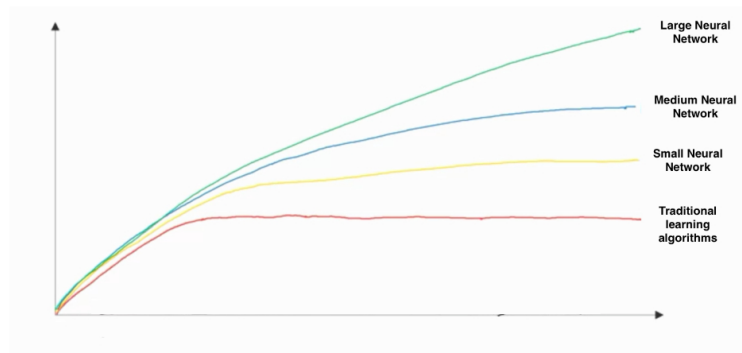
Correct

Great, you got all the right answers.

9.

1 / 1 point

In this diagram which we hand-drew in the lecture, what do the horizontal axis (x-axis) and vertical axis (y-axis) represent?



- x-axis is the amount of data
- y-axis is the size of the model you train.



- x-axis is the performance of the algorithm

- ☐ • x-axis is the performance of the algorithm.
- y-axis (vertical axis) is the amount of data.
- ☒ • x-axis is the amount of data
- y-axis (vertical axis) is the performance of the algorithm.
- ☐ • x-axis is the input to the algorithm
- y-axis is outputs.

 Expand

 **Correct**

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.)

1 / 1 point

- ☐ 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.

 Expand

 **Correct**

Great, you got all the right answers.