Try again once you are ready

Grade received 50%

Latest Submission Grade 50%

To pass 80% or higher

Try again

1. What does the analogy “AI is the new electricity” refer to? **1 / 1 point**

- AI is powering personal devices in our homes and offices, similar to electricity.
- Similar to electricity starting about 100 years ago, AI is transforming multiple industries.
- Through the “smart grid”, AI is delivering a new wave of electricity.
- AI runs on computers and is thus powered by electricity, but it is letting computers do things not possible before.

Expand

Correct
Yes. AI is transforming many fields from the car industry to agriculture to supply-chain...

2. Which of the following play a major role to achieve a very high level of performance with Deep Learning algorithms? **0 / 1 point**

- [x] Large amounts of data.

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

- [ ] Smaller models.
- [x] Deep learning has resulted in significant improvements in important applications such as online advertising, speech recognition, and image recognition.

Correct

These were all examples discussed in lecture 3.

- [x] Better designed features to use.

This should not be selected

No. One main difference between "classical" machine learning algorithms and deep learning algorithms is that Deep Learning models "figure out" the best features using the hidden layers.

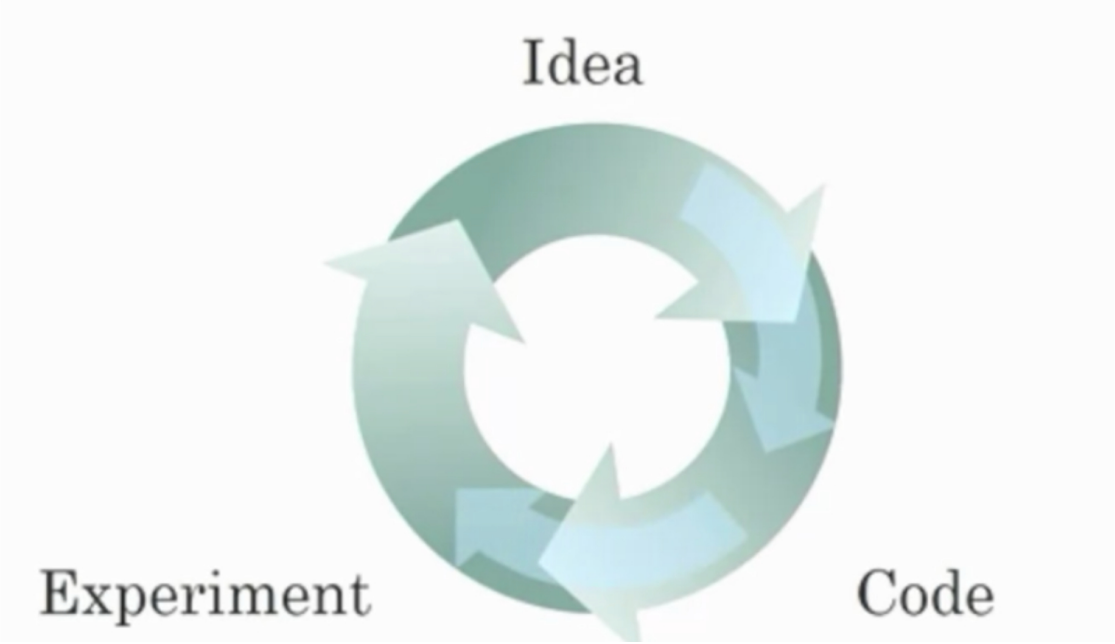
- [ ] Large models.

Expand

Incorrect

You didn't select all the correct 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? **0 / 1 point**



- [x] With larger datasets, the iteration process is faster.

  This should not be selected
  No. Training with more data usually requires more time.

- [x] 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.

- [x] 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

Incorrect
You chose the extra incorrect answers.

4. Neural networks are good at figuring out functions relating an input x to an output y given enough examples. True/False? **1 / 1 point**

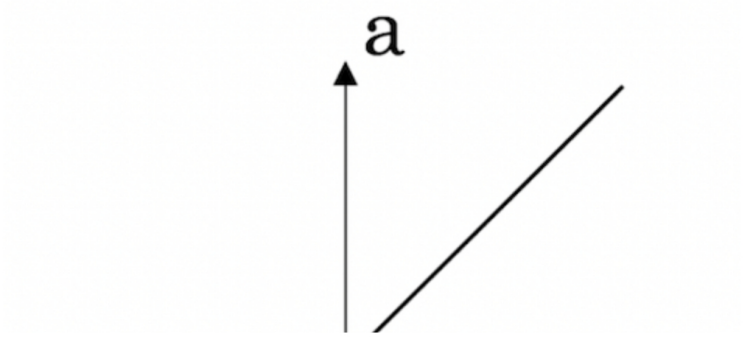
- ( ) False
- (•) True

Expand

Correct
Exactly, with neural networks, we don't need to "design" features by ourselves. The neural network figures out the necessary relations given enough data.

5. Which one of these plots represents a ReLU activation function? **1 / 1 point**

Figure 3:



Expand

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

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. Which of the following are examples of structured data? Choose all that apply. **0 / 1 point**

- [ ] A dataset with zip code, income, and name of a person.
- [x] 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 dataset with short poems.
- [ ] A set of audio recordings of a person saying a single word.

Expand

Incorrect
You didn't select all the correct answers

8. Why is an RNN (Recurrent Neural Network) used for machine translation, say translating English to French? (Check all that apply.) **1 / 1 point**

- [ ] It is strictly more powerful than a Convolutional Neural Network (CNN).
- [x] It can be trained as a supervised learning problem.

Correct
Yes. We can train it on many pairs of sentences x (English) and y (French).

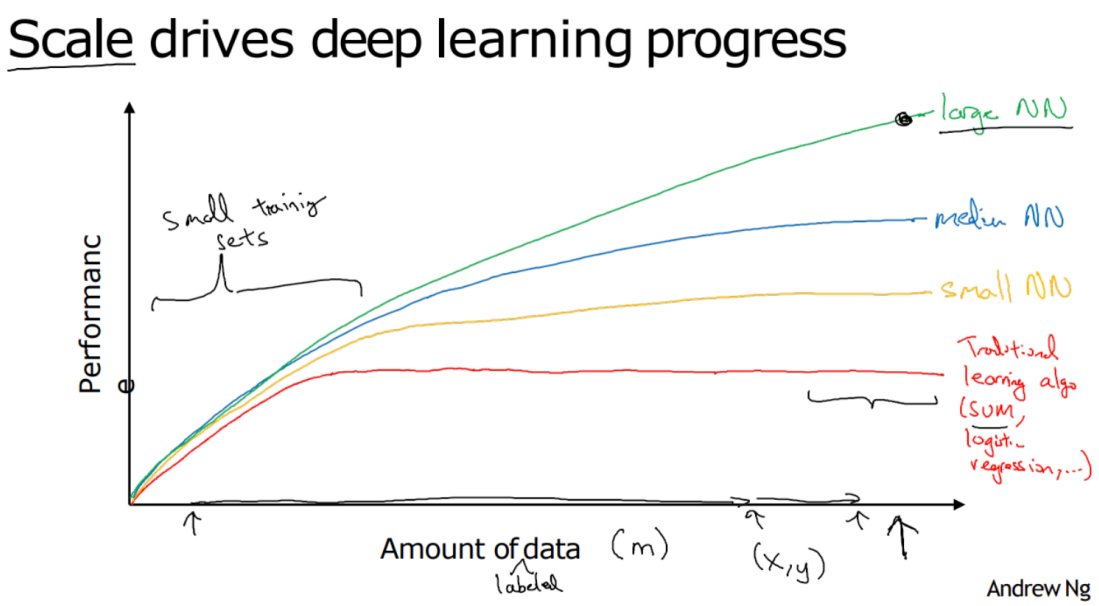
- [ ] RNNs represent the recurrent process of Idea->Code->Experiment->Idea->....
- [x] It is applicable when the input/output is a sequence (e.g., a sequence of words).

Correct
Yes. An RNN can map from a sequence of english words to a sequence of french words.

Expand

Correct
Great, you got all the right answers.

9. 0 / 1 point



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

- (•) True
- ( ) False

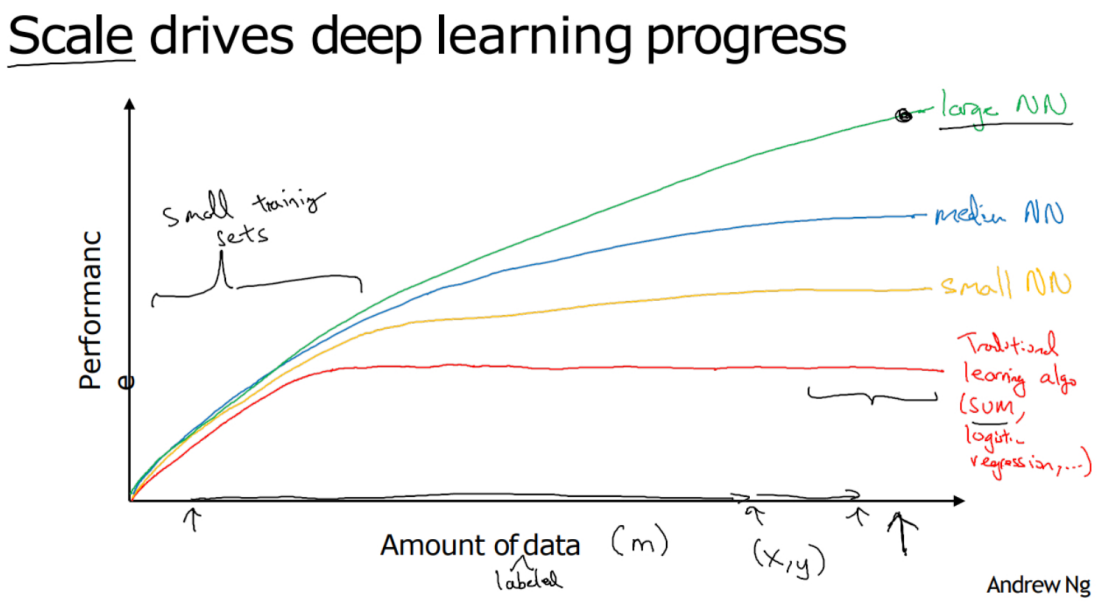
Expand

Incorrect

No, 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. The performance of a NN depends only on the size of the NN. True/False?

0 / 1 point



- False
- True

Expand

Incorrect

No. According to the trends in the figure above, It also depends on the amount of data.