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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.
- ☐ Eliminating the need for health care services.
- ☐ Creating an AI-powered society.
- ☐ 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?

1 / 1 point

- ☐ People were afraid of a machine rebellion.
- ☐ The theoretical tools didn't exist during the 80's.
- ☒ 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.

- ☒ 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.

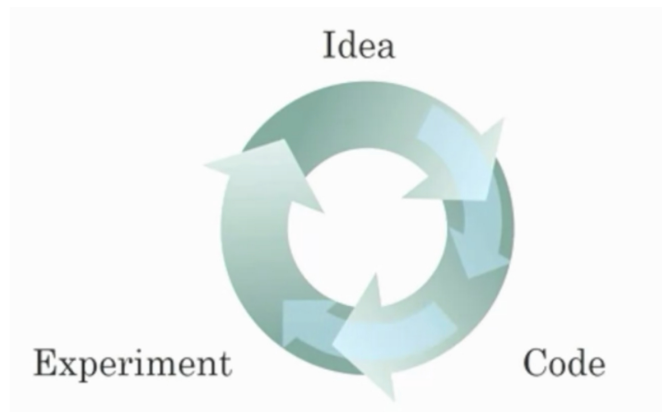
Expand

✔ 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



- ☒ 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.

- ☐ 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.

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

✓ **Correct**

Yes, as discussed in Lecture 4.

[↩ Expand](#)

✓ **Correct**

Great, you got all the right answers.

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?

0 / 1 point

☒ True

☐ False

[↩ Expand](#)

✗ **Incorrect**

No. 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. ReLU stands for which of the following?

1 / 1 point

☐ Representation Linear Unit

☒ Rectified Linear Unit

☐ Rectified Last Unit

☐ Recognition Linear Unit

[↩ Expand](#)

✓ **Correct**

Correct, ReLU stands for Rectified Linear Unit.

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

☒ 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.

[↩ Expand](#)

✓ **Correct**

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

1 / 1 point

☒ 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.

☐ RNNs represent the recurrent process of Idea->Code->Experiment->Idea->....

☒ 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).

☐ It is strictly more powerful than a Convolutional Neural Network (CNN).

↗ **Expand**

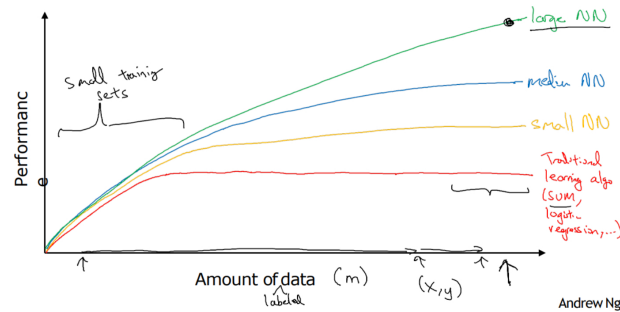
✓ **Correct**

Great, you got all the right answers.

9.

1 / 1 point

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 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 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.

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

☒ 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.