Neural Networks and Deep Learning

Week 1 quizzes solution

Question 1
What does the analogy "AI is the new electricity" refer to?

similar to electricity starting about 100 years ago. AI is transforming multiple industries

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

- ☐ A large amount of data
- ☐ Deep Learning has resulted in significant improvements in important applications such as online advertising, speech recognition, and image recognition
- ☐ Large models

Question 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?

- ☐ Some algorithms are specifically designed to run experiments
- ☐ Experiments finish faster, producing better ideas through increased tempo

Question 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?

False

Question 5
ReLU stands for which of the following?

Rectified Linear Unit

Question 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?

True

Question 7

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

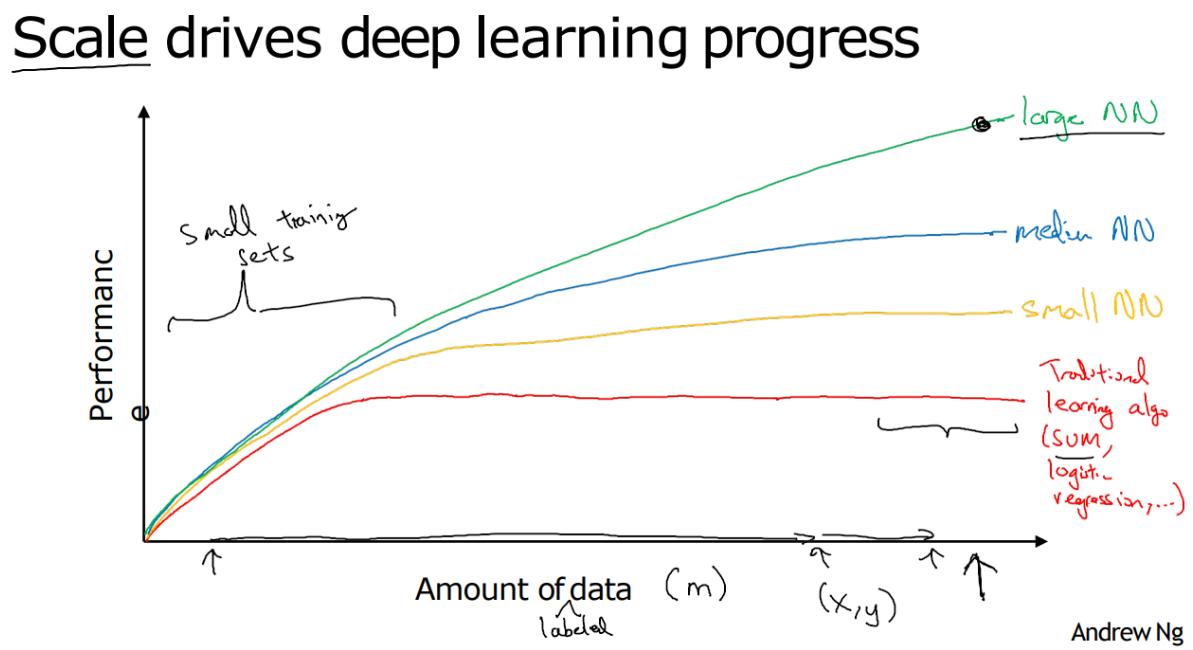
- ☐ A dataset with zip code, income, and name of a person
- ☐ A dataset of weight, height, age, the sugar level in the blood, and arterial pressure

Question 8

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

- ☐ It can trained as supervised Machine Learning problem
- ☐ It is applicable when input/output is a sequence (e.g a sequence of words)

Question 8



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?

True

Question 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.)

- ☐ Increasing the size of a neural network generally does not hurt an algorithms performance and it may help significantly
- ☐ Increasing the training set size generally does not hurt an algorithms performance and it may help significantly