

# Data Features Summative Quiz

LATEST SUBMISSION GRADE

100%

1. Modern deep neural networks work well because:

1 / 1 point

- ☐ They use very complex, sophisticated algorithms
- ☒ They can scale up to very large amounts of data
- ☐ They are based on clear, logical rules that are designed based on expert knowledge
- ☐ They use input data that is in a very sophisticated, high level, feature representation.



**Correct**

Yes, each neuron is quite simple, but you can combine a lot of them to handle a lot of data. In general, machine learning works best if you have a lot of data

2. What is the output of a regression?

1 / 1 point

- ☒ One or more numbers
- ☐ One of a set of categories
- ☐ A picture
- ☐ A reward or punishment



**Correct**

Yes, regression outputs numbers

3. The feature representation you use has no effect in k-nearest neighbour because it is based on similarity?

1 / 1 point

- ☐ True
- ☒ False

**Correct**

That's right. How you measure similarity is probably the most important aspect of the nearest neighbour method, and that will depend a lot on which features you are using

4. Which of these is true?

1 / 1 point

- ☐ If you are using high level features you will need more training data than if you are using low level features
- ☒ If you are using low level features you will need more training data than if you are using high level features
- ☐ The features do not affect how much data you need

**Correct**

Yes, it is easier to learn using high level features, which means you will need less data to learn a particular concept

5. Which do you typically think need more disc space?

1 / 1 point

- ☐ High level features
- ☒ Low level features

**Correct**

That's right, high level features typically encode smaller, more meaning full information, like words. Low level features typically encode the raw data, like audio samples or pixel, which can take a lot of space. This isn't always the case, high level image features created by filters can some times be the same size and the low level features