

✓ **Congratulations! You passed!**

TO PASS 80% or higher

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Deep Learning Models

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1. Why is the convolutional layer important in convolutional neural networks?

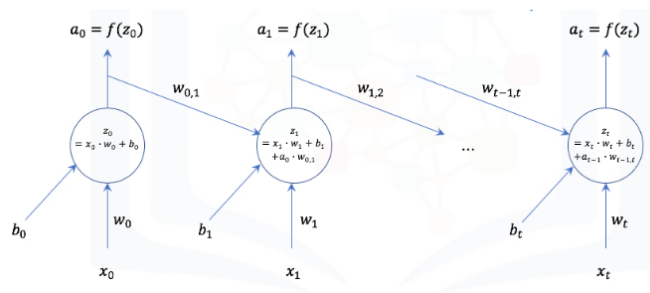
1 / 1 point

- ☐ Because a convolutional layer would make the model overfit the training data so that it generalizes better
- ☐ Because convolutional neural networks are unsupervised deep learning models and therefore, a convolutional layer helps the model better fit the data
- ☒ Because if we do not use a convolutional layer, we will end up with a massive number of parameters that will need to be optimized and it will be super computationally expensive
- ☐ Because convolutional neural networks take flattened images as input and therefore the convolutional layer helps the model regenerate the input images
- ☐ None of the above

✓ **Correct**
Correct

2. The following is a typical architecture of a convolutional neural network.

1 / 1 point



- ☐ True
- ☒ False

✓ **Correct**
Correct.

3. For unsupervised learning, which of the following deep neural networks would you choose? Select all that apply

1 / 1 point

- ☒ Autoencoders

✓ **Correct**
Correct.

- ☐ Convolutional Neural Networks
- ☐ Recurrent Neural Networks
- ☐ Long Short Term Memory Networks
- ☒ Restricted Boltzmann Machines

✓ **Correct**
Correct

4. Recurrent Neural Networks are networks with loops, that don't just take a new input at a time, but also take as input the output from the data point at the previous instance.

1 / 1 point

- ☒ True
- ☐ False

✓ **Correct**
Correct

5. Which of the following statements is correct?

1 / 1 point

- ☐ A convolutional neural network is an unsupervised neural network model that uses backpropagation by setting the target variable to be the same as the input
- ☒ An autoencoder is an unsupervised neural network model that uses backpropagation by setting the target variable to be the same as the input
- ☐ An autoencoder consists of a series of convolutional, ReLU, and pooling layers, as well as a number of fully connected layers
- ☐ Just like conventional neural networks, a convolutional neural network takes $(n \times 1)$ vectors as input
- ☐ Recurrent neural networks are best for solving problems related to image recognition, object detection, and other computer vision applications

✓ **Correct**
Correct