Deep Learning Models

LATEST SUBMISSION GRADE

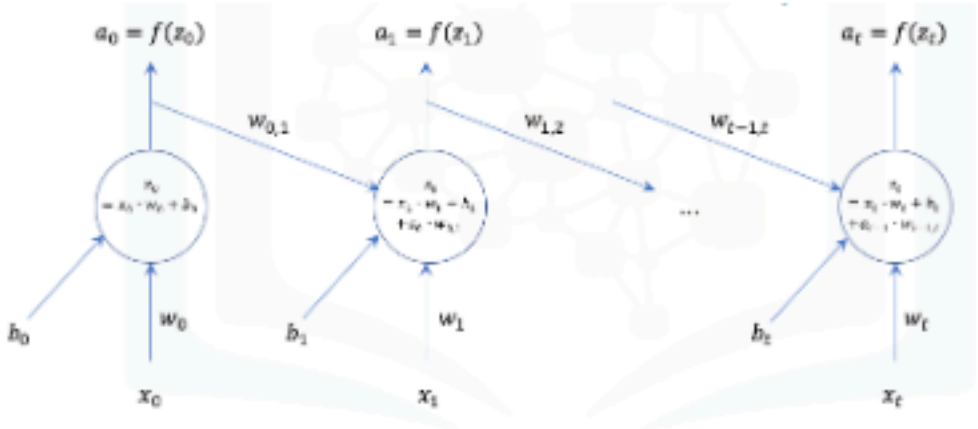
100%

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

- [ ] Recurrent Neural Networks
- [ ] Convolutional Neural Netwroks
- [x] Autoencoders

✓ **Correct**
Correct.

- [x] Restricted Boltzmann Machines

✓ **Correct**
Correct

- [ ] Long Short Term Memory Networks

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 x 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