QUIZ: Deep Learning Models

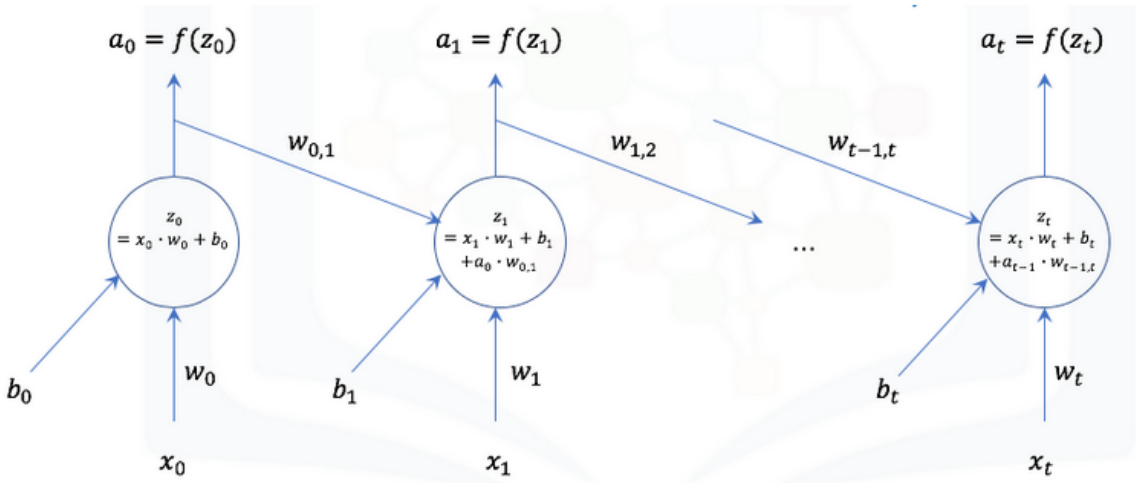
Pregunta 1:

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

- ( ) 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

Pregunta 2:

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



- ( ) True
- (•) False

Pregunta 3:

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

- [x] Restricted Boltzmann Machines
- [x] Long Short Term Memory Networks
- [x] Autoencoders
- [ ] Recurrent Neural Networks
- [ ] Convolutional Neural Netwroks

Pregunta 4:

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.

- (●) True
- ( ) False

Pregunta 5:

5. Which of the following statements is correct?

- ( ) 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