Unit 8 - Week 6

Assignment 6

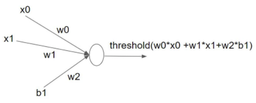
The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-09-11, 23:59 IST.

1) Consider the neural network below. Find the appropriate weights for w0, w1 and w2 to represent the AND function. *2 points*

Threshold function={1, if output >0; 0 otherwise}.

x0 and x1 are the inputs and b1=1 is the bias.



a. w0=1, w1=1, w2=1
b. w0=1, w1=1, w2=-1
c. w0=-1, w1=-1, w2=-1
d. w0=2, w1=-2, w3=-1

- a
- b
- c
- d

No, the answer is incorrect.
Score: 0
Accepted Answers:
b

2) Which of the combination of weights make the network represent OR function: *2 points*

a. w0=1,w1=1,w2=0
b. w0=1, w2=1, w3=1
c. w0=1, w1=1, w2=-1
d. w0=-1, w1=-1, w2=-1

- a
- b
- c
- d

No, the answer is incorrect.
Score: 0
Accepted Answers:
a

3) Which of the following gives non-linearity to a neural network *2 points*

a. Gradient descent
b. Bias
c. Relu Activation Function
d. None

- a
- b
- c
- d

No, the answer is incorrect.
Score: 0
Accepted Answers:
c

4) Suppose you are to design a system where you want to perform word prediction also known as language modelling You are to take output from previous state and also the input at each step to predict the next word. The inputs at each step are the words for which the next words are to be predicted. Which of the following neural network would you use? *2 points*

a. Multi Layer Perceptron
b. Recurrent Neural Network
c. Convolutional Neural Network
d. Perceptron.

- a
- b
- c
- d

No, the answer is incorrect.
Score: 0
Accepted Answers:
b

5) For a fully-connected deep network with one hidden layer, increasing the number of hidden units should have what effect on bias and variance? *2 points*

a. Decrease bias, increase variance
b. Increase bias, increase variance
c. Increase bias, decrease variance
d. No change

- a
- b
- c
- d

No, the answer is incorrect.
Score: 0
Accepted Answers:
a

6) You are given the task of predicting the price of a house given the various features for a house such as number of rooms, area(sq ft), etc. *2 points*

How many neurons should you have at the output?

a. 3
b. 2
c. 1
d. 4

- a
- b
- c
- d

No, the answer is incorrect.
Score: 0
Accepted Answers:
c

7) Which one of the following activation functions can be used as an activation function at the output layer for the task given in Question 6? *2 points*

a. Sigmoid
b. Relu
c. Softmax

- a
- b
- c

No, the answer is incorrect.
Score: 0
Accepted Answers:
b

8) What should be the loss function used to train the model given in Question 6? *2 points*

a. Multi-Class Cross-Entropy Loss
b. Mean Squared Error
c. Binary Cross-Entropy Loss

- a
- b
- c

No, the answer is incorrect.
Score: 0
Accepted Answers:
b

9) A Convolutional Neural Network (CNN) for an image classification task has the following operations. *2 points*

1) Max Pooling
2) Convolution Operation
3) Flatten
4) Fully Connected Layer

Identify the correct sequence from the options below:

a. 4,3,2,1
b. 2,1,3,4
c. 3,1,2,4
d. 4,2,1,3

- a
- b
- c
- d

No, the answer is incorrect.
Score: 0
Accepted Answers:
b

10) A vanilla autoencoder is a Neural Network architecture used to create lower dimensional input representation. Which of the following statements are true about it? *2 points*

a. It is an unsupervised algorithm
b. It can generate new data by learning the probability distribution
c. Its target output is the input
d. Autoencoders have linear encoder and decoder

- a
- b
- c
- d

No, the answer is incorrect.
Score: 0
Accepted Answers:
a
c