

Unit 5 - Week 3

Course outline
How does an NPTEL online course work?
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Week 1
Week 2
Week 3 <ul style="list-style-type: none">● Feedforward Neural Networks (a.k.a multilayered network of neurons)○ Learning Paramters of Feedforward Neural Networks (Intuition)○ Output functions and Loss functions○ Backpropagation (Intuition)○ Backpropagation: Computing Gradients w.r.t. the Output Units○ Backpropagation: Computing Gradients w.r.t. Hidden Units○ Backpropagation: Computing Gradients w.r.t. Parameters○ Backpropagation: Pseudo code○ Derivative of the activation function○ Information content, Entropy & cross entropy● Lecture Material for Week 3○ Quiz : Assignment 3○ Week 3 Feedback
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Assignment 3

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

Due on 2020-02-19, 23:59 IST.

- 1) Entropy is represented as

$$-\sum_i p_i \log q_i$$

$$-\sum_i p_i \log p_i$$

$$\sum_i p_i \log q_i$$

None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
 $-\sum_i p_i \log p_i$

2) Which of the following statement is true?

An event with high probability has high information content

An event with low probability has high information content

An event with low probability has low information content

None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
An event with low probability has high information content

3) The number of nodes in the input layer is 10 and the hidden layer is 6 (In MLP). The maximum number of connections from the input layer to the hidden layer are

72

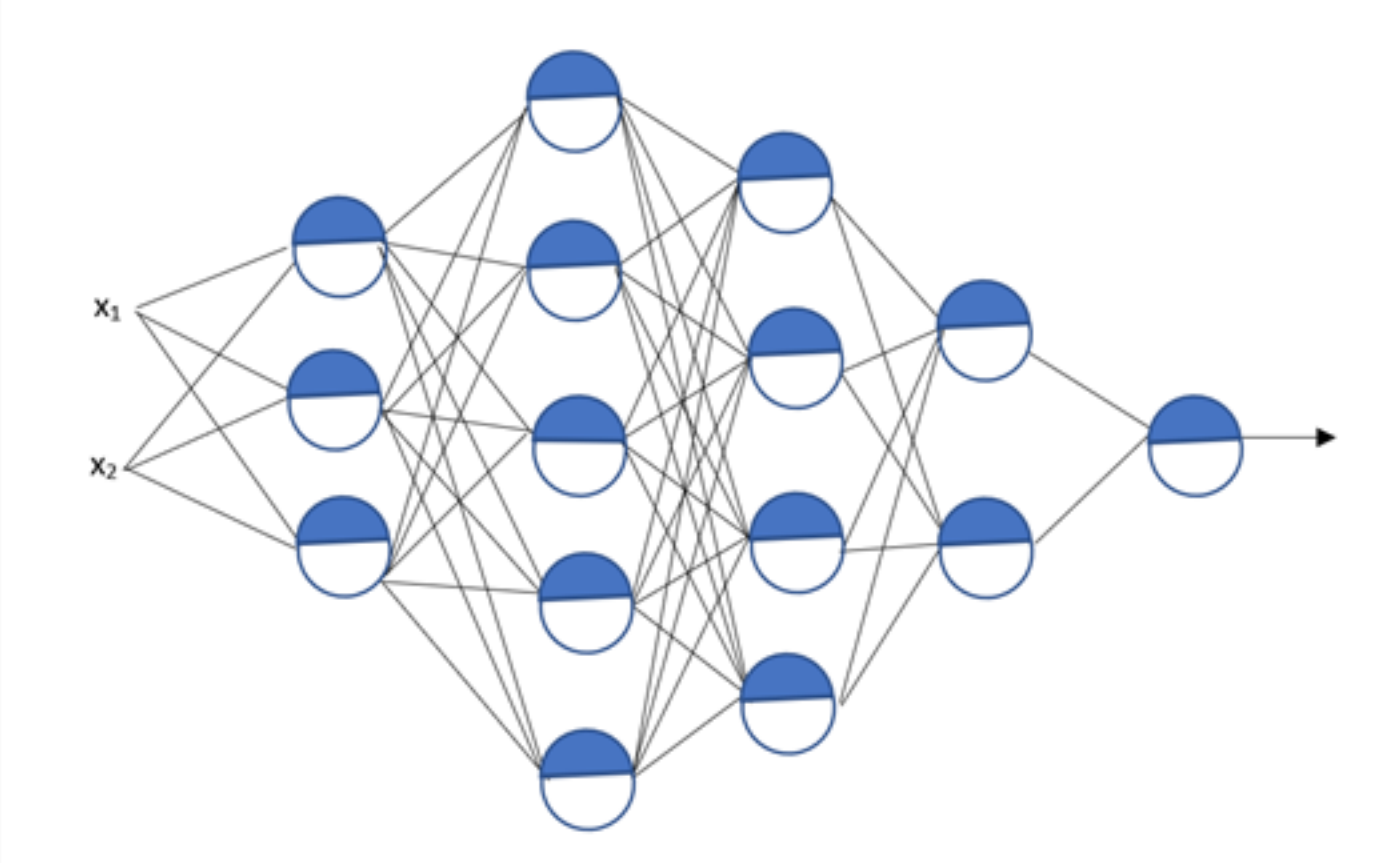
60

More than 60

120

No, the answer is incorrect.
Score: 0
Accepted Answers:
60

4) Consider the following Feed Forward Neural Network:



Find the number of hidden layers in the above figure:

6

5

4

2

No, the answer is incorrect.
Score: 0
Accepted Answers:
4

5) Consider the figure in question:4. Find the number of neurons in the above figure in 2nd hidden layer:

4

5

3

2

No, the answer is incorrect.
Score: 0
Accepted Answers:
5

6) Consider the figure in question:4. What is the dimension of the weight matrix to connect input to 1st layer?

3 x 2

3 x 3

2 x 3

None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
3 x 2

7) Consider the figure in question:4. What is the dimension of the first bias?

2

1

3

None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
3

8) Consider the figure in question: 4. Find the number of inputs.

3

2

1

None of the above

No, the answer is incorrect.
Score: 0
Accepted Answers:
2

9) Which of the following method is used at the output layer for classification?

Linear

softmax

Linear or softmax

None of these

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

10) In regression problem, which of the following loss function will be used?

squared error loss

cross entropy

None of these

No, the answer is incorrect.
Score: 0
Accepted Answers:
squared error loss