

Unit 11 - Week 9

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Assignment 9

The due date for submitting this assignment has passed. **Due on 2019-10-02, 23:59 IST.**
As per our records you have not submitted this assignment.

- 1) What are the steps for training a neural network? 1 point

 - Calculate error between the actual value and the predicted value
 - Reiterate until you find the best weights of network
 - Pass an input through the network and get values for output layer
 - Initialize random weight and bias
 - Go to each neuron which contributes to the error and change its respective values to reduce the error.

a) III, II, I, V, IV
b) IV, III, I, V, II
c) I, II, III, IV, V
d) V, IV, III, II, I

a)
 b)
 c)
 d)

No, the answer is incorrect.
Score: 0
Accepted Answers: b)
- 2) On what parameters can change in weight vector depend in case of a neural network? 1 point

a) learning parameters
b) input vector
c) backpropagation error
d) all of the mentioned

a)
 b)
 c)
 d)

No, the answer is incorrect.
Score: 0
Accepted Answers: d)
- 3) What is unsupervised learning? 1 point

a) features of group explicitly stated
b) number of groups may be known
c) neither feature nor number of groups is known
d) none of the mentioned

a)
 b)
 c)
 d)

No, the answer is incorrect.
Score: 0
Accepted Answers: c)
- 4) Which of the following is the component of learning system? 1 point

a) Goal
b) Model
c) Learning rules
d) All of the mentioned

a)
 b)
 c)
 d)

No, the answer is incorrect.
Score: 0
Accepted Answers: d)
- 5) Assume a simple MLP model with 3 neurons and inputs= 1,2,3. The weights to the input neurons are 4,5 and 6 respectively. Assume the activation function linear with slope equal to 4. What will be the output? 1 point

a) 32
b) 643
c) 96
d) 128

a)
 b)
 c)
 d)

No, the answer is incorrect.
Score: 0
Accepted Answers: d)
- 6) For a 3 class problem, following are the discriminant functions; 1 point

$g_{12}(X) = 10x_1 - x_2 - 10 = 0$, $g_{23}(X) = x_1 + 2x_2 - 10 = 0$ and $g_{13}(X) = x_1 - 2x_2 - 10 = 0$.
Using these functions classify the unknown feature vector (1,1,0).

a) Class 1
b) Class 2
c) Class 3
d) Ambiguous point

a)
 b)
 c)
 d)

No, the answer is incorrect.
Score: 0
Accepted Answers: a)
- 7) For a 3 class problem, following are the discriminant functions; 1 point

$g_{12}(X) = 10x_1 - x_2 - 10 = 0$, $g_{23}(X) = x_1 + 2x_2 - 10 = 0$ and $g_{13}(X) = x_1 - 2x_2 - 10 = 0$.
Using these functions classify the unknown feature vector (0,6).

a) Class 1
b) Class 2
c) Class 3
d) Ambiguous point

a)
 b)
 c)
 d)

No, the answer is incorrect.
Score: 0
Accepted Answers: b)
- 8) For a 3 class problem, following are the discriminant functions; 1 point

$g_{12}(X) = 10x_1 - x_2 - 10 = 0$, $g_{23}(X) = x_1 + 2x_2 - 10 = 0$ and $g_{13}(X) = x_1 - 2x_2 - 10 = 0$.
Using these functions classify the unknown feature vector (-2,-10).

a) Class 1
b) Class 2
c) Class 3
d) Ambiguous point

a)
 b)
 c)
 d)

No, the answer is incorrect.
Score: 0
Accepted Answers: d)
- 9) For a 3 class problem, following are the discriminant functions; 1 point

$g_{12}(X) = 9x_1 - 3x_2 = 0$, $g_{23}(X) = x_2 = 0$ and $g_{13}(X) = 9x_1 + x_2 = 0$.
Using these functions classify the unknown feature vector (-2,2).

a) Class 1
b) Class 2
c) Class 3
d) Ambiguous point

a)
 b)
 c)
 d)

No, the answer is incorrect.
Score: 0
Accepted Answers: b)
- 10) Which of the following is/are true for K-NN? 1 point

 - For large of K, the error bound of K-NN approaches to that of Bayes minimum risk classifier.
 - In case of too small value of k the algorithm is very sensitive to noise.
 - The classification accuracy is always better with larger values of k.

a) Only I and II
b) Only I and III
c) Only II and III
d) All, I, II and III

a)
 b)
 c)
 d)

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