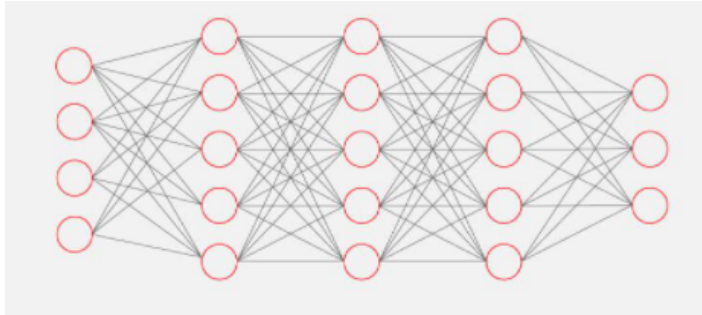


- ✓ What is the number of total number of neurons in the hidden layers for the given Neural Network. 2/2



15



- ✓ Let a, b and c be inputs to a model. And let there be two neurons ' h ' and ' f ' with functions defined as $h=a+b$ and $f=h*c$. What is the value of the gradients df/da , df/db and df/dc for $a=-2$, $b=-5$ and $c=-4$? 1/1

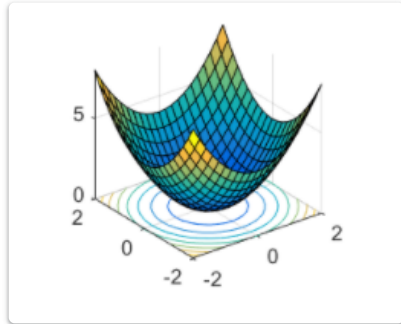
- ☐ (4, 4, -7)
- ☐ (4, 4, 3)
- ☒ (-4, -4, -7)
- ☐ (-4, -4, 3)



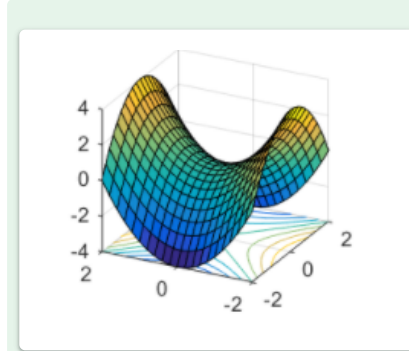
- ✓ Why is there a need of using Activation Functions in Neural Networks? 2/2

- ☒ To introduce nonlinearity into the neural network so that it can learn more complex functions. ✓
- ☐ To reduce computational expense
- ☒ It can help in limiting the value of output to our requirements ✓
- ☐ None of these

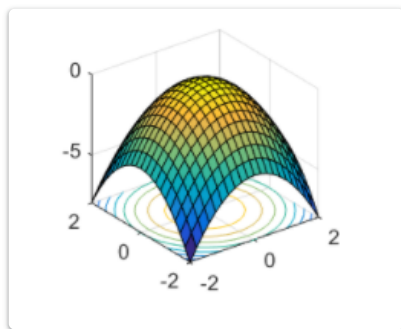
✗ In which of the following curves, gradient descent can get trapped in a saddle point? 0/2



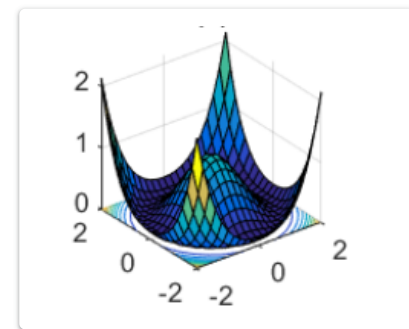
☐ A



☒ B



☐ C



☐ D

Correct answer

☒ B

☒ D

✓ Dimensionality reduction will decrease the training time of the model? 1/1

☒ True



☐ False

✓ Select the Correct Statement. 2/2

☐ PCA is a supervised method and maximum number of principal components \geq number of features

☒ PCA is an unsupervised method and maximum number of principal components \leq number of features ✓



- ☐ PCA is an unsupervised method and maximum number of principal components \geq number of features
- ☐ PCA is a supervised method and maximum number of principal components \leq number of features

✓ Backpropagation is a technique that changes weights in the neural network by 1/1

- ☐ From Source to Sink
- ☒ From Sink to Source ✓
- ☐ From Source to Hidden nodes
- ☐ None of these

✓ Minimum number of variables required for clustering? 1/1

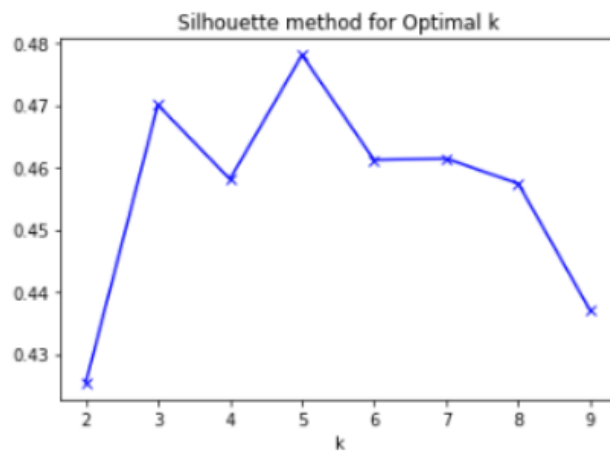
- ☐ 0
- ☒ 1 ✓
- ☐ 2
- ☐ 3

✓ K-means clustering algorithm does not suffer from the problem of convergence at local optima. 1/1

- ☐ True
- ☒ False ✓

✓ "Out of the given options", what is the best choice for number of clusters(k) ?

2/2



☒ 3



☐ 2

☐ 6

☐ 7

Questions Based on Graded Assignment

13 of 13 points

✓ Calculate the sigmoid value of 0.001. (Choose the closesy value)

1/1

☒ 0.5002



☐ 0.5005

☐ 0.5001

☐ 0.5020

✓ Calculate the cost, without optimizing the neural network for the given values of the variables? (weights = $[[1],[2]]$, bias = 2, $X\{data\} = [[1,2,-1.], [3,4,-3.2]]$, $Y\{target\} = [[1,0,1]]$)

2/2

☐ 8.502

☐ 0.317

☒ 5.801



☐ 0.323

✓ Calculate the cost after 1000 iterations, after optimizing the neural network, with same variable weights and data as in the previous question and learning rate = 0.009? 2/2

☐ 5.801

☒ 0.317 ✓

☐ 0.323

☐ 1.055

✓ Calculate the prediction values with weights = $[[0.112], [0.231]]$, bias = -0.3 2/2 and data (X) = $[[1, -1.1, -3.2], [1.2, 2, 0.1]]$?

☐ [1, 1, 1]

☒ [1, 1, 0] ✓

☐ [0, 0, 1]

☐ [0, 0, 0]

✓ Calculate the Training accuracy on the data loaded in the start of the notebook. (Number of iterations = 2000, learning rate = 0.005) 2/2

☐ 92.56

☐ 93.18

☒ 99.04 ✓

☐ 91.38

✓ Calculate the Test accuracy on the data loaded in the start of the notebook. (Number of iterations = 500, learning rate = 0.012) 2/2

☐ 66.0

☐ 34.0

☒ 80.0 ✓



✓ For the parameters given in the last question, after which iteration(amongst the given ones) do you observe the maximum value of the cost function? 2/2

☐ 1

☒ 100



☐ 200

☐ 400

You've reached the end of the quiz

0 of 0 points

I have read all my answers and this is my final submission. *

☒ YES

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