

Submission - 1 | Neural Networks Quiz

There are 11 multiple choice questions. The maximum time allotted is 15 mins. This will count for 5 marks out of the total allotted for this project (the rest are code assignments). The deadline to complete this is September 22nd, 2024, 11:59 PM.

Points: 10/11

 **Incorrect** 0/1 Points

1. Which of the following play a major role to achieve a very high level of performance with Deep Learning algorithms?



Multiple choice



More data



Larger models



Smaller models



Better designed features

 **Correct** 1/1 Points

2. What is the vanishing gradient problem in neural networks?



Single correct



Gradients become very small, making learning difficult



Gradients become very large, causing instability

- The network stops training
- The network overfits the training data

✓ **Correct** 1/1 Points

3. Which of the following are activation functions commonly used in neural networks?



Multiple Choice

- ReLU
- Sigmoid
- Tanh
- Linear Regression

✓ **Correct** 1/1 Points

4. What is the purpose of an activation function in a neural network? *



Single choice

- To introduce non-linearity into the model
- To initialise weights
- To normalise input data
- To reduce overfitting

✓ **Correct** 1/1 Points

5. What is the significance of the learning rate in backpropagation?



Single correct

- It controls the size of the steps taken to reach the minimum of the loss function
- It determines the number of layers in the network
- It initializes the weights of the network
- It normalizes the input data

✓ **Correct** 1/1 Points

6. Which of the following statements about neural networks is true?



Multiple choice

- They can approximate any continuous function given sufficient neurons and layers
- They can be used for both supervised and unsupervised learning tasks
- They are not used for image recognition tasks

✓ **Correct** 1/1 Points

7. Which of the following are steps involved in backpropagation? *



Multiple choice

- Forward pass
- Backward pass
- Update parameters

- Data normalization

✓ **Correct** 1/1 Points

8. Which of the following are advantages of using transfer learning in neural networks?



Multiple choice

- Reduced training time
- Improved performance with limited data
- Leveraging pre-trained models
- Eliminates the need for backpropagation

✓ **Correct** 1/1 Points

9. What is the primary purpose of backpropagation in neural networks?



Single Correct

- To initialise the parameters (weights & bias terms)
- To add more layers to the NN
- To prevent overfitting
- To update the parameters

✓ **Correct** 1/1 Points

10. What is the role of the softmax function in a neural network?



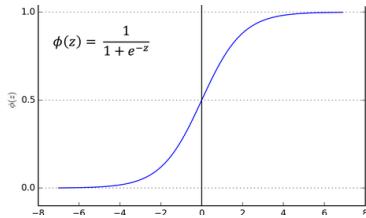
Single choice

- To normalize the input values to be between -1 and 1
- To reduce the dimensionality of the input features
- To minimise the loss function
- To convert logits into probabilities

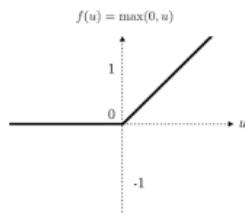
✓ Correct 1/1 Points

11. Which of the following depicts a ReLU activation function? *

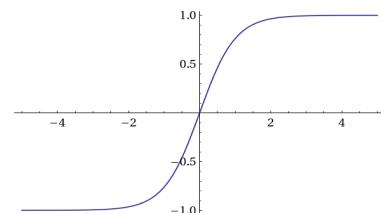
Single choice



Option 1



Option 2



Option 3



This content is created by the owner of the form. The data you submit will be sent to the form owner. Microsoft is not responsible for the privacy or security practices of its customers, including those of this form owner. Never give out your password.

Microsoft Forms | AI-Powered surveys, quizzes and polls [Create my own form](#)

[Privacy and cookies](#) | [Terms of use](#)