Status	Finished
Started	Monday, 26 August 2024, 11:50 AM
Completed	Monday, 26 August 2024, 12:03 PM
Duration	12 mins 44 secs
Marks	4.00/5.00
Grade	**8.00** out of 10.00 (**80**%)

Question 1

Correct

Mark 1.00 out of 1.00

Based on the idea of Maximum Likelihood Estimator, what is the best choice for the loss function in a classification problem?

- a. Absolute Loss
- b. Mean Squared Loss
- c. 0-1 loss
- d. Cross Entropy Loss ✓

The correct answer is:
Cross Entropy Loss

Question 2

Correct

Mark 1.00 out of 1.00

Which of the following sentences are true?

- a. In Overfitting the loss on both the training set and test set is high, while in Underfitting the loss on training set is low and test set is high
- b. In Overfitting the loss on the training set is high and test set is low, while in Underfitting the loss on training set is low and test set is high
- c. In Overfitting the loss on the training set is low and test set is high, while in Underfitting the loss on both training set and test set is high ✓
- d. In Overfitting the loss on the training set is low and test set is high, while in Underfitting the loss on training set is high and test set is low

The correct answer is:
In Overfitting the loss on the training set is low and test set is high, while in Underfitting the loss on both training set and test set is high

Question 3

Incorrect

Mark 0.00 out of 1.00

Which of the following sentences are true?

- a. Both f(x) = |x| and f(x) = -x are good activation functions for a neural network
- b. f(x) = |x| is not a good activation function and f(x) = -x is a good activation function, for a neural network
- c. f(x) = |x| is a good activation function and f(x) = -x is not a good activation function, for a neural network
- d. Neither of f(x) = |x| and f(x) = -x are good activation functions for a neural network ✗

The correct answer is:
f(x) = |x| is a good activation function and f(x) = -x is not a good activation function, for a neural network

Question 4

Correct

Mark 1.00 out of 1.00

Which of the following sentences are true?

- a. If the learning rate is very small then gradient descent will very likely reach a global minima, but take a long time, and if the learning rate is very large then gradient descent may fail to converge to any minima ✗
- b. If the learning rate is very small or very large then gradient descent will get stuck in a local minima.
- c. If the learning rate is very small then gradient descent may get stuck in a local minima, and if the learning rate is very large then gradient descent may fail to converge to any minima ✓
- d. If the learning rate is very small then gradient descent will likely get stuck in a local minima, but if the learning rate is very large then gradient descent will quickly converge to a local minima but not a global minima

The correct answer is:
If the learning rate is very small then gradient descent may get stuck in a local minima, and if the learning rate is very large then gradient descent may fail to converge to any minima

Question 5

Correct

Mark 1.00 out of 1.00

Which of the following are considered regularization methods for deep neural networks?

- [x] a. Dropout ✓
- [x] b. Batch Normalization ✗
- [ ] c. Nesterov momentum optimization
- [x] d. Data Augmentation ✓

The correct answers are:
Dropout,

Data Augmentation