Started on	Thursday, 3 February 2022, 2:00 PM
State	Finished
Completed on	Thursday, 3 February 2022, 2:20 PM
Time taken	19 mins 59 secs
Grade	**9.00** out of 15.00 (**60**%)

Question **1**

Correct

Mark 2.00 out of 2.00

Ground truth (target) labels (1-hot encoded) for a binary classification problem for some input data is [0 1]. Predicted values are [0.3 0.7]. What would be binary cross-entropy loss?

Answer: 0.5145 ✔

The correct answer is: 0.52

Question **2**

Correct

Mark 2.00 out of 2.00

If value of 4 output neurons before softamx is [2.9 1.5 0.4 0.2] (neuron 1 to neuron 4 in sequence), what would be softmax score of the third neuron (select the closest value)?

Select one:

- a. 0.06 ✔
- b. 0.04
- c. 0.07

The correct answer is: 0.06

Question **3**

Incorrect

Mark 0.00 out of 2.00

Assume spatial extent of the input image and convolution filter to be 600 x 400 and 11 x 11 respectively. Assume valid convolution operation and stride=1. What would be the total number of activation (neurons) in the resultant volume after after this convolution?

Answer: 59004 ✖

The correct answer is: 230100

Question **4**

Incorrect

Mark 0.00 out of 2.00

Assume size of the input image and convolution filter to be 600 x 400 x 3 and 11 x 11 x 3 respectively. If we wish to produce 10 feature maps as the output of this valid convolution operation (stride=1), how many connections are involved? Assume that each convolutional filter has an associated bias.

Answer: 238004 ✖

The correct answer is: 837564000

Question **5**

Not answered

Marked out of 2.00

Assume size of the input image and convolution filter to be 600 x 400 x 3 and 11 x 11 x 3 respectively. If we wish to produce 10 feature maps as the output of this convolution operation, how many parameters are involved? Ignore bias parameters in calculation.

Answer: ✖

The correct answer is: 3630

Question **6**

Correct

Mark 1.00 out of 1.00

In transfer learning, if the new dataset is large but very different from the original dataset:

Select one:

- a. we can afford to train a ConvNet from scratch ✔
- b. we can fine-tune through the full network
- c. it might work better to train the SVM classifier from activations somewhere earlier in the network
- d. the best idea might be to train a linear classifier on the CNN codes

The correct answer is: we can afford to train a ConvNet from scratch

Question **7**

Correct

Mark 1.00 out of 1.00

In transfer learning, if the new dataset is small but very different from the original dataset:

Select one:

- a. it might work better to train the SVM classifier from activations somewhere earlier in the network ✔
- b. the best idea might be to train a linear classifier on the CNN codes
- c. we can afford to train a ConvNet from scratch
- d. we can fine-tune through the full network

The correct answer is: it might work better to train the SVM classifier from activations somewhere earlier in the network

Question **8**

Correct

Mark 1.00 out of 1.00

A Deep Learning Model with high bias exihibits

Select one:

- a. Underfitting ✔
- b. Perfect fit
- c. Overfitting
- d. None of these

The correct answer is: Underfitting

Question **9**

Correct

Mark 1.00 out of 1.00

A Deep Learning Model with the high variance exihibits

Select one:

- a. None of these
- b. Overfitting ✔
- c. Underfitting
- d. Perfect fit

The correct answer is: Overfitting

Question **10**

Correct

Mark 1.00 out of 1.00

The popular choice of a weight function in perceptron/multilayer perceptron is

Select one:

- a. None of these
- b. Sum of product function
- c. Product function ✔
- d. Sum function

The correct answer is: Product function

◄ Practical 2 - CNN MNIST

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Transfer Learning Presentation ►