Quizizz

Quiz Name: Quiz-3

Student: Konda Mopuri

Date: Fri Nov 12 2021 - 8:01 am

93%

Accuracy % (correct / total)

15	14	1	0
Total Questions	✔ Correct	✖ Incorrect	⊘ Unattempted

Questions

No.	Question	Time Taken	Score	Response
1	How does an autoencoder achieve dimensionality compression? (write in 2-3 sentences) [2 Marks]	25 secs	1000	Original (input) space is of higher dimensions but the data lies in a manifold of smaller dimensions. Autoencoder learns the meaningful degrees of freedom that constitute the data. Thus an autoencoder achieves dimensionality reduction via projecting an input sample into the learned smaller dimensional space.
2	What is (are) the regularization effects of using dropout in DNNs? (what positive effects are resulted in the network; 2-3 sentences) [2 Marks]	20 secs	1000	1 Improves independence between the units 2 Distributes the representation among all the units 3 Avoids co-adaptation of the units in the architecture
3	Decoder part of an autoencoder need not use transposed convolutions. [1 Mark]	8 secs	930	✔ True
4	Any modification that we make to the learning algorithm with the aim of reducing the training error is known as the regularization. [1 Mark]	10 secs	910	✔ False

No.	Question	Time Taken	Score	Response
5	In the double-descent risk curve only the variance component of the risk drives the optimization. [1 Mark]	7 secs	940	✔ False
6	What are the two general aspects of gradients to take care while training the deeper neural networks? (2 sentences) [2 Marks]	49 secs	1000	1. Gradients should not vanish 2. Gradients should be homogeneous at all the layers
7	What is the limitation of temporal convolutions for processing sequential data? (1 sentence) [1 Mark]	60 secs	1000	They do not have the notion of memory to retain the information from previous time instances while inferring at a given time instant.
8	Which of the following statements are True. [2 Marks]	22 secs	920	✔ Main difference of RNNs compared to their feedforward counterparts is that they can process input of variable dimensions (length).
9	In the one-to-many configuration of the RNNs, what acts as input to the processing memory unit from the second time instance? [1 Mark]	129 secs	1000	Output predicted at the previous time instance acts as input.
10	Pass-through connections added for avoiding the squashing by nonlinearity pose challenge for optimizing the network. [1 Mark]	7 secs	0	True
11	Given x = [2 3 -2 0 2] and k = [2 0 -1], compute the convolution output performed in (i) neural networks, and (ii) signal processing. [2 Marks]	62 secs	1000	1. [6, 6, -6] 2. [4, 6, -6, -3, 6, 0, -2]
12	What is the principle behind the working of a denoising autoencoder? (1-2 sentences) [1 Mark]	64 secs	1000	Autoencoders can capture the dependencies across signal components
13	An undercomplete **autoencoder** is where hidden code has less neurons than the input. What is the advantage of this configuration compared to an overcomplete counterpart (where the hidden code has more neurons than input)? [1 mark]	88 secs	1000	Overcomplete autoencoders are prone to learn the degenerate scenario in which the network learns an identity function instead of learning the salient features of input. Undercomplete configuration avoids this situation.

No.	Question	Time Taken	Score	Response
14	While training recurrent neural networks, error gradients can accumulate during an update and result in very large gradients. This is known as exploding gradients. What might be done to handle this issue? (1-2 sentences) [1 mark]	81 secs	1000	Gradient (components) can be clipped to limit the magnitude to be within a specified range.
15	Find out the True statements. [1 Mark]	11 secs	960	✔ Strongly regularized model suffers high bias