Announcements

s About the Course

Ask a Question

Progress Mentor

NPTEL » Deep Learning (IITKGP)

Unit 10 - Week 8:

Course outline How to access the portal Week 0 : Assignment 0 Week 1: Week 2: Week 3: Week 4: Week 5: Week 6: Week 7: Week 8: Lecture 36 : CNN Architecture Lecture 37 : MLP versus CNN, Popular CNN Architecture: LeNet ○ Lecture 38 : Popular CNN Architecture: AlexNet Lecture 39 : Popular CNN Architecture: VGG16, Transfer Learning Lecture 40 : Vanishing and **Exploding Gradient** O Week 8 : Lecture Materials Quiz : Assignment 8 O Feedback for Week 8 Week 9: Week 10: Week 11:

Week 12:

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Assignment Solution

Assignment 8		
The due date for submitting this assignment has passed. As per our records you have not submitted this assignment.	Due on 2019-09-25, 23:59	IST.
In which neural net architecture, does weight sharing occur?	;	2 points
a. Convolutional Neural Network		
b. Fully Connected Neural Network c. Neither a nor b		
Od. Both a and b No, the answer is incorrect.		
Score: 0 Accepted Answers:		
a. Convolutional Neural Network 2) The input image has been converted into a metrix of size 29 V 29 and a kernel/filter of size 7 V 7 with a stride of 1.	What will be the size of the	2 nointe
2) The input image has been converted into a matrix of size 28 X 28 and a kernel/filter of size 7 X 7 with a stride of 1 onvoluted matrix?	. What will be the size of the	2 points
○ a. 22x22 ○ b. 21x21		
○ c. 28x28 ○ d. 7x7		
No, the answer is incorrect. Score: 0		
Accepted Answers: a. 22x22		
3) When pooling layer is added in a convolutional neural network, what is preserved?	(0 points
a. Translation Invariance		
b. Rotation Invariance c. Neither a nor b		
Od. Both a and b No, the answer is incorrect.		
Score: 0 Accepted Answers:		
a. Translation Invariance	atter cuited to colve the problem?	2 nointe
 4) For an image recognition problem (recognizing a cat in a photo), which architecture of neural network would be be a. Multi Layer Perceptron 	etter suited to solve the problem?	z points
b. Convolutional Neural Network c. Recurrent Neural Network		
d. Perceptron		
No, the answer is incorrect. Score: 0 Accepted Answers:		
b. Convolutional Neural Network		
5) Suppose you have 5 convolutional kernel of size 7 x 7 with zero padding and stride 1 in the first layer of a convolu- put of dimension 224 x 224 x 3 through this layer. What are the dimensions of the data which the next layer will receive	-	2 points
a. 217 x 217 x 3		
○ b. 217 x 217 x 8 ○ c. 218 x 218 x 5		
Od. 220 x 220 x 7 No, the answer is incorrect.		
Score: 0 Accepted Answers:		
c. 218 x 218 x 5		0 :- 4-
What is the mathematical form of the ReLU layer? a. f(x)=max(0,x)		2 points
b. f(x)=min(0,x) c. f(x)=min(0, αx), where α is a small constant		
\bigcirc d. f(x)=1(x<0)(α x)+1(x>=0)(x), where α is a small constant		
No, the answer is incorrect. Score: 0 Accepted Answers:		
a. $f(x)=max(0,x)$		
7) Consider the scenario. The problem you are trying to solve has a small amount of data. Fortunately, you have a prained on a similar problem. Which of the following methodologies would you choose to make use of this pre-trained needs.		0 points
a. Re-train the model for the new dataset		
b. Assess on every layer how the model performs and only select a few of them c. Fine tune the last couple of layers only		
Od. Freeze all the layers except the last, re-train the last layer No, the answer is incorrect.		
Score: 0 Accepted Answers:		
d. Freeze all the layers except the last, re-train the last layer 8) For a transfer learning task, which layers according to you can be more generally transferred to other task?		2 nointe
a. Higher layers		2 points
○ b. Lower layers ○ c. Task specific		
d. Cannot comment		
No, the answer is incorrect. Score: 0 Accepted Answers:		
b. Lower layers		
9) For a general filter size of F, what should be the padding P such that the original input size is preserved (i.e. after emains same as input dimension)?	convolution output dimension	2 points
a. P=(F-1)/2		
b. P=(F-1) c. P=(F+1)/2		
Od. None of the above No, the answer is incorrect.		
Score: 0 Accepted Answers:		
a. P=(F-1)/2		
10) A fully-connected neural network without bias has 100 input neurons, 100 hidden neurons and 10 output neurons ssociated with hidden layer, what is the number of learnable parameters??	. if dropout of probability 0.5 is	2 points
○ a. 5500 ○ b. 11000		
_ c. 100000		
No, the answer is incorrect.		
Score: 0 Accepted Answers: b. 11000		