Homework 2 Quiz

- Due Feb 21 at 11:59pm
- Points 10
- Questions 10
- Available Feb 7 at 11:59pm - Feb 21 at 11:59pm
- Time Limit None
- Allowed Attempts Unlimited

Take the Quiz Again

Attempt History

	Attempt	Time	Score
KEPT	Attempt 2	2 minutes	10 out of 10
LATEST	Attempt 2	2 minutes	10 out of 10
	Attempt 1	15 minutes	9.67 out of 10

Correct answers are hidden.

Score for this attempt: 10 out of 10
Submitted Feb 21 at 6:48am
This attempt took 2 minutes.

Question 1
1 / 1 pts
Which of the following statements about convolution layers is incorrect?

The primary operation of ConvTransposed1d is to convolve the input (with stride 1) after upsampling to obtain the output.

A conv1d stride1 layer followed by a downsample1d layer with factor k is equivalent to a conv1d with stride k.

Regular convolutions directly obtain the affine value Z for a layer by convolving the input values A from the previous layer which leads to a reduction in the output size.

In multi- channel images, the basic rule is that no. input channels = no. kernels and no. output channels = no. kernel channels

Question 2
1 / 1 pts

The pooling operation itself is essentially an invariant operation that disregards slight positional variations. Typically, pooling employs a stride greater than 1, which is analogous to performing convolution followed by downsampling.

- (●) True
- ( ) False

Question 3

1 / 1 pts

Which of the following are true about pooling operations?

- [x] Max-Pooling can be viewed as a standard convolution with a standard filter with max activation and mean-pooling can be seen as a normal convolution whose filter is 1/K where K is filter size.
- [ ] Pooling layer functions as a resampling layer in the forward pass and downsampling layer in the backward pass.
- [x] Pooling layer has no learnable parameters that need to be updated in the backward pass
- [x] Both max-pooling and mean-pooling can be implemented by scanning the input.

Question 4

1 / 1 pts

True or False? ConvTranspose2D is a combination of DownSample2d and convolution with stride 1.

- ( ) True
- (●) False

Question 5

1 / 1 pts

How many Identities are their in the verification dataset

- ( ) 720
- (●) 5749
- ( ) 8631
- ( ) 6000

Question 6

1 / 1 pts

How many identities does the dataset consist of?

- ( ) 7000
- ( ) 6001
- (●) 8631
- ( ) 8630

Question 7

1 / 1 pts

Which of the following are advantages of augmentations according to the writeup?

- [x] Better generalization of the model
- [x] Increases the amount of data that is available for the model to train
- [ ] To make the model sensitive to position and orientation
- [ ] Increase overfitting

Question 8

1 / 1 pts

Which similarity measures are mentioned in the writeup?

- [x] Cosine similarity
- [x] Euclidean distance
- [ ] Jaccard distance
- [ ] Manhattan distance

Question 9

1 / 1 pts

What is the primary goal of using advanced loss functions in face verification?

- ( ) Minimizing inter-class variability
- ( ) Optimizing cross-entropy loss
- ( ) Maximizing intra-class compactness
- (•) Enhancing feature vector separability

Question 10

1 / 1 pts

What is the main purpose of using skip connections in residual network blocks?

- [x] To prevent vanishing and exploding gradients
- [ ] To reduce the number of parameters in the network
- [ ] To improve feature extraction in shallow layers
- [x] To increase the depth and efficiency of training deep neural networks

Quiz Score: 10 out of 10