Unit 9 - Week 8

Course outline

How to access the portal?

Week 1

Week 2

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Week 7

Week 8

- Lecture 33: TensorFlow Customization
- Lecture 34: Customizing tf.keras - Part 1
- Lecture 35: Customizing tf.keras - Part 2
- Lecture 36: TensorFlow Distributed Training
- Quiz : Assignment 8
- Week 8 Feedback

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Assignment 8

The due date for submitting this assignment has passed.
As per our records you have not submitted this assignment.

Due on 2019-10-23, 23:59 IST.

1) Which of the following are the advantages of using Tensorflow? *1 point*

- Distributed computing
- Auto differentiation capabilities
- Customization
- Pipelining
- Support for synchronous and asynchronous computations

No, the answer is incorrect.
Score: 0
Accepted Answers:
Distributed computing
Auto differentiation capabilities
Customization
Pipelining
Support for synchronous and asynchronous computations

2) Select the steps that can be performed in a distributed manner: *1 point*

- Weight initialization
- Loss computation
- Gradients computation
- Weights update
- Model Prediction

No, the answer is incorrect.
Score: 0
Accepted Answers:
Loss computation
Gradients computation
Model Prediction

3) Select the correct option: *1 point*

I. Mirrored Strategy	II. Parameter Servers Strategy
x. Synchronous	y. Asynchronous

- I: (x); II: (x)
- I: (x); II: (y)
- I: (y); II: (x)
- I: (y); II: (y)

No, the answer is incorrect.
Score: 0
Accepted Answers:
I: (x); II: (x)

4) Following strategies can be used in case of multiple machines: *1 point*

- One Device Strategy
- One Device Strategy
- Multi-Worker Mirrored Strategy
- Parameter Servers Strategy

No, the answer is incorrect.
Score: 0
Accepted Answers:
Multi-Worker Mirrored Strategy
Parameter Servers Strategy

5) Suppose you have 4 GPUs (having 2GB memory each) to train your deep learning model. You have 1000 data points in your dataset that takes around 10 GB of storage. What will be the best choice for batch size for one device (using Mirrored Strategy in TF)? *1 point*

- 32
- 64
- 128
- 256
- 512
- 1024

No, the answer is incorrect.
Score: 0
Accepted Answers:
128

6) In the previous case what is the overall batch size being used? *1 point*

- 64
- 128
- 256
- 512
- 1024
- 2048

No, the answer is incorrect.
Score: 0
Accepted Answers:
512

7) What will be the values of `w` if we execute the following code: *1 point*

```
x = tf.constant(2.0)
with tf.GradientTape(persistent=True) as t:
  t.watch(x)
  y = x * x * x
  z = y * y
  w = 3*z - 2*y + x
dw_dx = t.gradient(w, x)
dz_dx = t.gradient(z, x)
dy_dx = t.gradient(y, x)
```

- 42
- 114
- 178
- 186
- 190

No, the answer is incorrect.
Score: 0
Accepted Answers:
178

8) What will be the values of `dw_dx` if we execute the previous code: *1 point*

- 553
- 361
- 565
- 89
- 6889

No, the answer is incorrect.
Score: 0
Accepted Answers:
553

9) Please visit this notebook for answering the following questions. What will be the output of the model before training if we give x = 3.0 as input? *1 point*

- 6
- 9
- 15
- 18

No, the answer is incorrect.
Score: 0
Accepted Answers:
9

10) What is the range of loss after the 10th epoch during the training process? *1 point*

- 1.0 - 1.1
- 1.1 - 1.5
- 1.5 - 2.5
- 2.5 - 5

No, the answer is incorrect.
Score: 0
Accepted Answers:
2.5 - 5

11) What is the range of loss after the 20th epoch? *1 point*

- 1.0 - 1.1
- 1.1 - 1.5
- 1.5 - 2.5
- 2.5 - 5

No, the answer is incorrect.
Score: 0
Accepted Answers:
1.0 - 1.1

12) What is the range of loss after the 20th epoch if learning rate was 0.01? *1 point*

- 2.5 - 5
- 5 - 20
- 20 - 50
- 50 - 100

No, the answer is incorrect.
Score: 0
Accepted Answers:
20 - 50