

Explore 🗸

What do you want to learn?







Overview

Week 1

Week 2

Week 3

Week 4

Grades

Notes

Discussion Forums

Messages

Course Info

Week 4

Custom and Distributed Training with TensorFlow

Week 4

Discuss the topic here.

9 threads · Last post 13 days ago

Go to forum

Distributed Training





This week, you will harness the power of distributed training to process more data and train larger models, faster. You'll get an overview of various distributed training strategies and then practice working with two strategies, one that trains on multiple GPU cores, and the other that trains on multiple TPU cores. Get your cape ready, because you're going to get some superpowers this week!



Learning Objectives

- Explain how distributed training is different from regular model training
- Use the Mirrored Strategy to train a model on multiple GPUs on the same device
- Use the TPU Strategy to train on multiple cores of a TPU



Overview	of	Distribution	Strategies

- ▶ Video: Intro to distribution strategies 3 min
- ▶ Video: Types of distribution strategies 3 min

Mirrored Strategy

- ▶ Video: Converting code to the Mirrored Strategy 4 min
- ▶ Video: Mirrored Strategy code walkthrough 4 min
- Lab: Mirrored Strategy 1h

Multiple GPU Mirrored Strategy

- ▶ Video: Custom Training for Multiple GPU Mirrored Strategy 5 min
- ▶ Video: Multi GPU Mirrored Strategy code walkthrough 13 min
- Lab: Multi GPU Mirrored Strategy 1h

TPU Strategy

▶ Video: TPU Strategy 6 min			
▶ Video: TPU Strategy code walkthrough 10 min			
Lab: TPU Strategy 1h			
Other Distributed Strategies			
▶ Video: Other Distributed Strategies 4 min			
Reading: References used in Other Distributed Strategies 10 min			
Lab: One Device Strategy 1h			
Quiz			
Quiz: Distributed Strategy 6 questions Due Apr 5, 1:59 AM CDT			
Assignment: Distributed Strategy			
Programming Assignment: Distributed Strategy 3h Due Apr 5, 1:59 AM CDT			
Practice Programming Assignment: Upload your model (optional) 1h			
Course Resources			
© Reading: References 10 min			
Acknowledgments			
Reading: Acknowledgments 10 min			

