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Week 4

Custom Models, Layers, and Loss Functions with TensorFlow

Week 4

Discuss the topic here.

31 threads · Last post 11 days ago

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Custom Models



You can build off of existing models to add custom functionality. This week, extend the TensorFlow Model Class to build a ResNet model!

Learning Objectives

- Explain some benefits to defining a custom model class instead of using the Functional or Sequential APIs
- Define a model by creating a Python class that inherits from TensorFlow's Model class
- Describe functions that can be inherited from the TensorFlow Model class
- Build a residual network by defining a custom model class

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Complex Architectures with the Functional API

[▶ Video: Intro to custom models](#) 1 min[Resume](#)[▶ Video: Complex architectures with the Functional API](#) 3 min[▶ Video: Coding a Wide and Deep model](#) 2 min[📅 Lab: Build a basic model](#) 1h

Using the Model class to simplify complex architectures

[▶ Video: Using the Model class to simplify architectures](#) 3 min[▶ Video: Understanding Residual networks](#) 7 min[📖 Reading: Residual networks lectures \(optional\)](#) 10 min

Implementing ResNet

[▶ Video: Coding a Residual network with the Model class](#) 5 min[▶ Video: ResNet code walkthrough](#) 5 min[📅 Lab: Build a ResNet model](#) 1h

Week 4 Quiz: Custom models

[📖 Quiz: Custom Models](#) 5 questions

Due Apr 5, 1:59 AM CDT

Assignment: Custom Models

[📅 Programming Assignment: Create a VGG network](#) 3h

Due Apr 5, 1:59 AM CDT

