



Overview

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Course Info

Week 2

Custom Models, Layers, and Loss Functions with TensorFlow

Week 2

Discuss the topic here.

12 threads · Last post 12 days ago

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Custom Loss Functions



Loss functions help measure how well a model is doing, and are used to help a neural network learn from the training data. Learn how to build custom loss functions, including the contrastive loss function that is used in a Siamese network.

Learning Objectives

- Describe when you need to build a custom loss function
- Implement Huber Loss with a custom loss function
- Add an adjustable hyper parameter to custom loss using a wrapper function
- Define a custom loss using an object oriented class
- Implement contrastive loss function used in a Siamese network

Less

Custom loss functions

Video: Welcome to Week 2 1 min

Resume

Video: Creating a custom loss function 3 min

Reading: Huber Loss reference 5 min

Video: Coding the Huber Loss function 2 min

Video: Huber Loss code walkthrough 2 min

Lab: Huber Loss lab 1h

Custom loss hyperparameters and classes

Video: Adding hyperparameters to custom loss functions 2 min

Video: Turning loss functions into classes 1 min

Video: Huber Object Loss code walkthrough 3 min

Lab: Huber Loss object 1h

Contrastive Loss


Video: Contrastive Loss 3 min

Reading: Reference: Dimensionality reduction by Learning an Invariant Mapping 3 min


Video: Coding Contrastive Loss 2 min

Lab: Contrastive loss in the siamese network 1h

Quiz

 **Quiz: Custom Loss** 5 questions Due Mar 22, 1:59 AM CDT

Assignment: Custom Loss

 **Programming Assignment: Creating a custom loss function** 3h Due Mar 22, 1:59 AM CDT

