deeplearning.ai

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Week 3

Introduction to TensorFlow for Artificial Intelligence, Machine Learning, and Deep Learning

Week 3
Discuss this week's modules here.

503 threads · Last post 13 hours ago

Go to forum

Enhancing Vision with Convolutional Neural Networks

Laurence Moroney

Welcome to week 3! In week 2 you saw a basic Neural Network for Computer Vision. It did the job nicely, but it was a little naive in its approach. This week we'll see how to make it better, as discussed by Laurence and Andrew here.

Enhancing Vision with Convolutional Neural Networks

▶ **Video:** A conversation with Andrew Ng   1 min   **Resume**

▶ **Video:** What are convolutions and pooling?   2 min

▥ **Reading:** Coding convolutions and pooling layers   10 min

▶ **Video:** Implementing convolutional layers   1 min

▥ **Reading:** Learn more about convolutions   10 min

▶ **Video:** Implementing pooling layers   4 min

▥ **Reading:** Getting hands-on, your first ConvNet   10 min

▶ **Video:** Improving the Fashion classifier with convolutions   4 min

▥ **Reading:** Try it for yourself   1h

▶ **Video:** Walking through convolutions   3 min

▥ **Reading:** Experiment with filters and pools   1h

▤ **Quiz:** Week 3 Quiz   6 questions   Due Nov 23, 1:59 AM CST

Weekly Exercise - Improving DNN Performance using Convolutions

▱ **Lab:** Exercise 3 (Improve MNIST with convolutions)   1h

</> **Programming Assignment:** Exercise 3 (Improve MNIST with convolutions))   3h   Due Nov 23, 1:59 AM CST

▥ **Reading:** Week 3 Resources   10 min

Optional: Ungraded Google Colaboratory environment

⧉ **Ungraded External Tool:** Exercise 3 - Improve MNIST with convolutions   1h