sjchoi86 / dl_tutorials

Deep learning tutorials (2nd ed.)

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presentations	week6	26 days ago
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README.md

Deep learning tutorials

Deep learning tutorials (2nd ed.)

Week1

1. Deep learning intro.
2. Python basics
3. Let's play with images & MNIST
4. Terminologies

Week2 - Do you know deep learning?

1. CNN and AlexNet
2. TensorFlow basics
3. Logistic regression
4. GoogLeNet
5. AlphaGo: MCTS+CNN
6. Let's implement MLP!
7. Let's play with you OWN DATASET
8. Regularization methods
9. Optimization methods
10. Restricted Boltzmann Machine
11. Let's implement denoising autoencoder

Week3 - CNN basics

1. Semantic segmentation: FCN, DeconvNet, DeepLab with atrous conv
2. Let's implement a simple CNN
3. Let's implement a basic CNN
4. Let's implement semantic segmentation

5. Weakly supervised localization: Global average pooling
6. Implement MLP and CNN on your OWN DATASET
7. Denoising deconvolutional neural network

Week4 - CNN applications + RNN basics

1. Image detection (RCNN, SPPnet, FastRCNN, FasterRCNN)
2. Other detections (YOLO, AttentionNet)
3. Let's use TensorBoards
4. RNN from Colah's blog
5. Visual QnA: DPPnet + MCBP!
6. Super resolution
7. Deep reinforcement learning

Week5 - RNN applications

1. RNN basic + handwriting generation
2. Let's implement RNNs
3. Let's implement Word2vec
4. Image captioning: Show and Tell + Show, attend and tell
5. char-rnn + how can we use Hangul?

Week6 - Deep learning is so FUN!

1. Residual network and some analysis
2. Neural Style: Texture synsthesis+Inverting CNN
3. Let's implement neural style
4. Bayesian optimization
5. Adversaral attack?
6. Generative adversarial network