

< Deep Learning - PART2 TF2 CNNs >

Ch 5. More on Topics Related to CNNs

2021/10/01

< Topic 1 > Variational Autoencoders

- FRANÇOIS CHOLLET, "Deep Learning with Python", Section 8.4, pp. 296, Manning, 2018.

< Topic 2 > Generative Adversarial Networks (GANs)

- FRANÇOIS CHOLLET, "Deep Learning with Python", Section 8.5, pp. 305, Manning, 2018.

< Topic 3 > Neural style transfer

- FRANÇOIS CHOLLET, "Deep Learning with Python", Section 8.3, pp. 287, Manning, 2018.

< Topic 4 > Visualizing what convnets learn

- FRANÇOIS CHOLLET, "Deep Learning with Python", Section 5.4, pp. 160, Manning, 2018.

< Topic 5 > Inception Module - GoogLeNet

[Reference]

1. Andrew Ng (吳恩達教授) "C4W2L05 Network In Network and 1x1 Convolution"
<https://www.youtube.com/watch?v=c1RBQzKsDCk> (<https://www.youtube.com/watch?v=c1RBQzKsDCk>)
2. Andrew Ng (吳恩達教授) "C4W2L06 Inception Network Motivation"
<https://www.youtube.com/watch?v=C86ZXvgpejM&list=PLkDaE6sCZn6GI29AoE31iwdVwSG-KnDzF&index=17>
(<https://www.youtube.com/watch?v=C86ZXvgpejM&list=PLkDaE6sCZn6GI29AoE31iwdVwSG-KnDzF&index=17>)
3. Andrew Ng (吳恩達教授) "C4W2L07 Inception Network" <https://www.youtube.com/watch?v=KfV8CJh7hE0&list=PLkDaE6sCZn6GI29AoE31iwdVwSG-KnDzF&index=18>
(<https://www.youtube.com/watch?v=KfV8CJh7hE0&list=PLkDaE6sCZn6GI29AoE31iwdVwSG-KnDzF&index=18>)
4. Chao Wen, "TensorFlow implementation of GoogLeNet"
<https://github.com/walsvid/GoogLeNet-TensorFlow> (<https://github.com/walsvid/GoogLeNet-TensorFlow>)

5. "CNN經典模型：GoogLeNet (從Inception v1到v4的演進)" <https://www.itread01.com/content/1544969366.html>
(<https://www.itread01.com/content/1544969366.html>)

< Topic 6 > Deep Residual Networks (ResNets)

[Reference]

1. "Trains a ResNet on the CIFAR10 dataset" https://keras.io/examples/cifar10_resnet/
(https://keras.io/examples/cifar10_resnet/)
2. Andrew Ng (吳恩達教授) "C4W2L03 Resnets" <https://www.youtube.com/watch?v=ZILlUvp5lk>
(<https://www.youtube.com/watch?v=ZILlUvp5lk>)
3. Andrew Ng (吳恩達教授) "C4W2L04 Why ResNets Work" <https://www.youtube.com/watch?v=RYth6EbuQm&list=PLkDaE6sCZn6GI29AoE31iwdVwSG-KnDzF&index=15>
(<https://www.youtube.com/watch?v=RYth6EbuQm&list=PLkDaE6sCZn6GI29AoE31iwdVwSG-KnDzF&index=15>)
4. "ResNet v1: Deep Residual Learning for Image Recognition" <https://arxiv.org/pdf/1512.03385.pdf> (<https://arxiv.org/pdf/1512.03385.pdf>)
5. "ResNet v2: Identity Mappings in Deep Residual Networks" <https://arxiv.org/pdf/1603.05027.pdf> (<https://arxiv.org/pdf/1603.05027.pdf>)
6. "你必须要知道CNN模型：ResNet" <https://zhuanlan.zhihu.com/p/31852747>
(<https://zhuanlan.zhihu.com/p/31852747>)

< Topic 7 > Object Detection

1. Joseph Redmon, "How computers learn to recognize objects instantly" -- TEDTalk (中文字幕 · YouTube video clip) <https://youtu.be/Cgxsv1riJhI> (<https://youtu.be/Cgxsv1riJhI>)
2. Prof Andrew Ng, "Convolutional Neural Networks - Object Detection", <https://zh-tw.coursera.org/learn/convolutional-neural-networks#syllabus> (<https://zh-tw.coursera.org/learn/convolutional-neural-networks#syllabus>)
3. Joyce Su, "Deep Learning for Object Detection: A Comprehensive Review", Towards Data Science, 2017/09/12. <https://towardsdatascience.com/deep-learning-for-object-detection-a-comprehensive-review-73930816d8d9> (<https://towardsdatascience.com/deep-learning-for-object-detection-a-comprehensive-review-73930816d8d9>)
4. Chengwei Zhang, "How to train an object detection model easy for free", <https://www.dlology.com/blog/how-to-train-an-object-detection-model-easy-for-free/>
(<https://www.dlology.com/blog/how-to-train-an-object-detection-model-easy-for-free/>)
5. Kaggle Competiton : "Open Images 2019 - Object Detection" <https://www.kaggle.com/c/open-images-2019-object-detection>
(<https://www.kaggle.com/c/open-images-2019-object-detection>)