Introduction to CNN
HL
2020-9-4

1. Software Tools for Deep Learning

(1) Installation of TF

(1.1) Pr-requisite CUDA, Version and Computabillity
cuDNN CUDA Deep Neural Network Installation

(1.2) TF installation
Activate / Deactivate TF

https://github.com/hualili/opencv/blob/master/IP120-AI-DL/2018F/2018F-1-from-1-Installation-tensorflow-2017-7-28.pdf

(2) Textbook example on Keras, by Francois Chollet

https://github.com/hualili/opencv/blob/master/IP120-AI-DL/2018F/2018F-6-DeepLearningCh02.pdf

https://github.com/fchollet/deep-learning-with-python-notebooks

2. Introduction to NN

(1) Introduction to NN
https://github.com/hualili/opencv/blob/master/IP120-AI-DL/2018F/2018F-7-107-NeuralNets-Intro-2017-10-7.pdf

(2) Example of simple NN hand computation
https://github.com/hualili/opencv/blob/master/IP120-AI-DL/2018F/2018F-7-107-Feedford1.jpg

(3) Simple code for NN
2019S-29-Python-NN-Intro-2019-4-5.pdf

https://victorzhou.com/blog/intro-to-neural-networks/

(4) Coding to Architecture
TF-Keras-Example1
https://github.com/hualili/opencv/blob/master/IP120-AI-DL/2018F/2018F-5-lec3-5-4-2-lec2-TF-Keras-Example1-v4.pdf

3. Preprocessing
(1) ROI
5-ROI-video-poly.py
5-ROI-video-rect-2clk-down.py

https://github.com/hualili/opencv/blob/master/deep-learning-2020S/5-ROI-video-rect-2clk-down.py

2019F-5-2.6.draw_roi_using contour.py
https://github.com/hualili/opencv/tree/master/IP120-AI-DL/2018F

(2) Resize Image/video
https://github.com/hualili/opencv/blob/master/IP120-AI-DL/2018F/7-3ResizeImage.py

2019S-20-presizeimg.py
https://github.com/hualili/CMPE297/blob/master/2019S/2019S-20-presizeimg.py

4. OpenCV
(1) OpenCV Coding Reference Sheet
0-Summer2018-OpenCV-sheet.pdf
0-Summer2018-OpenCV-sheet.pdf
https://github.com/hualili/opencv/blob/master/IP110-Summer18/0-Summer2018-OpenCV-sheet.pdf

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