Back Propagation Technique and Objective Functions
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1. github Facenet
(1) github for the source code
https://github.com/davidsandberg/facenet

(2) Lecture notes
https://github.com/hualili/opencv/blob/master/deep-learning-2020S/10-2020F-105b%23110-2-facenet-hl-v2-2020-9-22.pdf

2. Revisit and review on 2D convolution
(1) Mathematical formulation
https://github.com/hualili/opencv/blob/master/IP110-Deep-Learning/103-2DConvolution-v2-2017-9-20.pdf

(2) Example of simple hand computation
Link: https://github.com/hualili/opencv/blob/master/IP110-Deep-Learning/103-2-2DConvolution-lectureNotes-2017-9-20%20(copy).pdf

Link: https://github.com/hualili/opencv/blob/master/IP110-Summer18/2-2018Summer-kernelDesign-2018-6-27.pdf

3. Back Propagation
(1) Lecture notes
My hand written notes:
10-2020F-106a-back-prop1.jpeg
10-2020F-106a-back-prop2.jpeg

(2) Formal mathematical formulation in my lecture notes
10-2020F-106a-back-prop3-hl-2020-10-1.pdf

(3) Reference book for the adoption of naming conventions and feed forward NN architecture mathematical description (no convolutional part)
10-2020F-106a-Neuralnetowrks-book-ref1.jpg

4. Nonlinear Optimization Techniques as Reference
(1) Steepest gradient decent technique
10-2020F-106b-steepest-gradient-descent1.jpg
10-2020F-106b-steepest-gradient-descent2.jpg
10-2020F-106b-steepest-gradient-descent3.jpg
10-2020F-106b-steepest-gradient-descent4.jpg

(2) further reading on nonlinear optimization book opencv/deep-learning-2020S/10-2020F-106b-book-ref-optimization-numerical.jpeg

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