Deep Learning

- 딥러닝 이해와 응용 (Raspberry Pi에서 딥러닝) -

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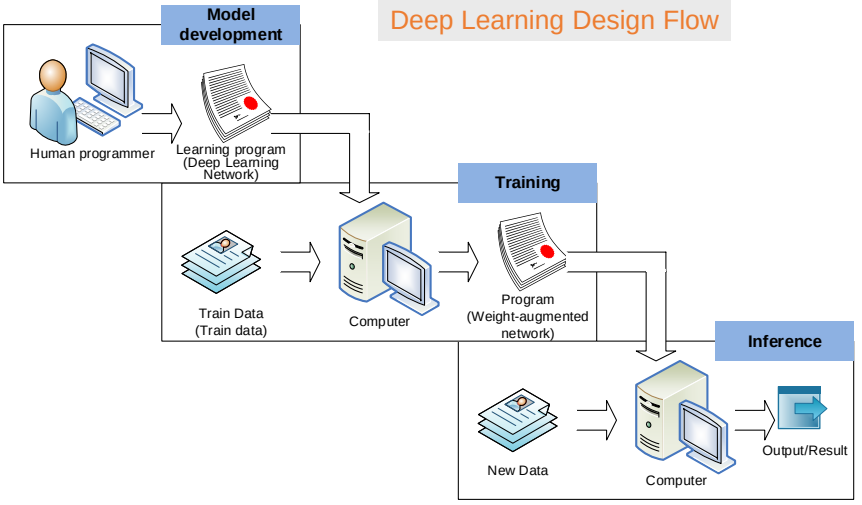
Goals and objectives

- Goals
  - Understanding of artificial intelligence, machine learning, and deep learning.
  - Acquiring the working knowledge of deep learning model.
  - Practicing development and running deep learning model
- Objectives
  - Understanding of deep neural network
  - Understanding of well known DNN for image classification.
  - LeNet (MNIST), ??? (CIFAR-10), AlexNet (ImageNet).
  - Understanding of Tiny-DNN
    - C++ implementation of DNN
  - Understanding of Python and Numpy
  - Understanding of TensorFlow
  - Understanding of Caffe
  - Understanding of Darknet/YOLO

What have been covered

Deep Learning Design Flow

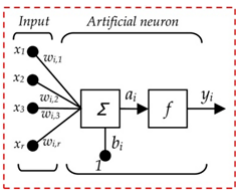


(3)

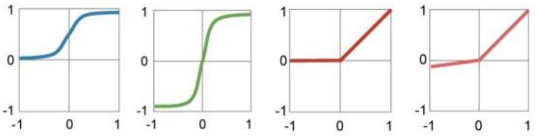
What have been covered

Deep-learning related topics

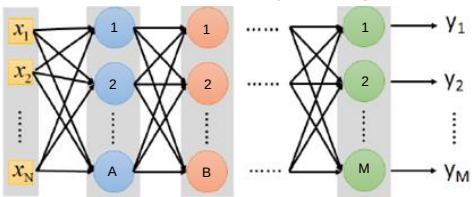
Neuron



Activation functions



Artificial neural network: deep-learning net



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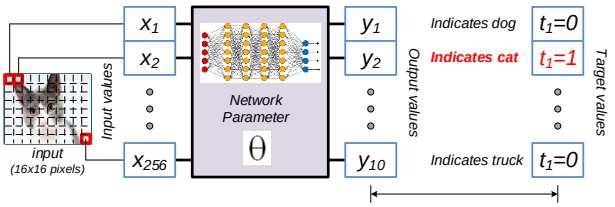
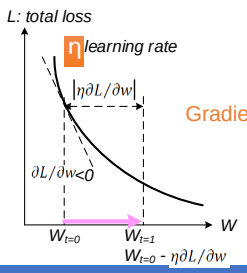
What have been covered

Deep-learning related topics

Cost functions



loss = sum of distances

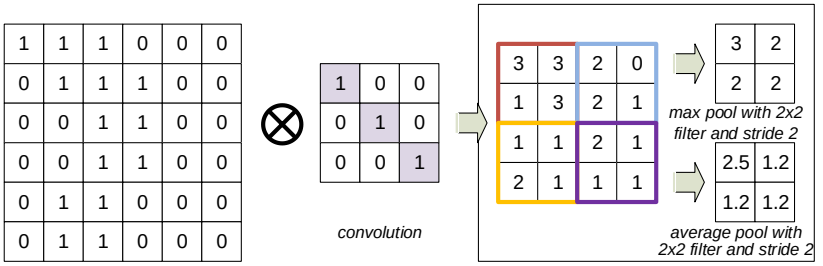


Gradient descent and learning rate

Softmax
CNN
Covolution
Pooling

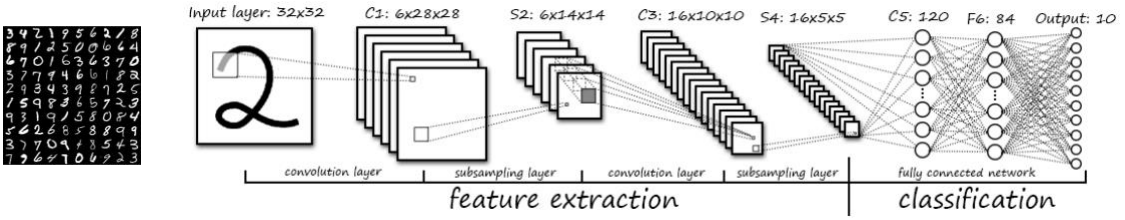
What have been covered

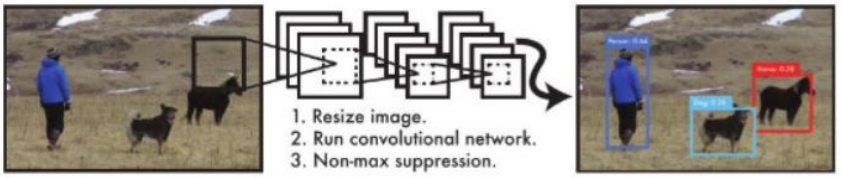
- Convolution, Pooling



What have been covered

- LeNet and YOLO





What have been covered

- Darknet and Caffe V1 as framwork

Caffe

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