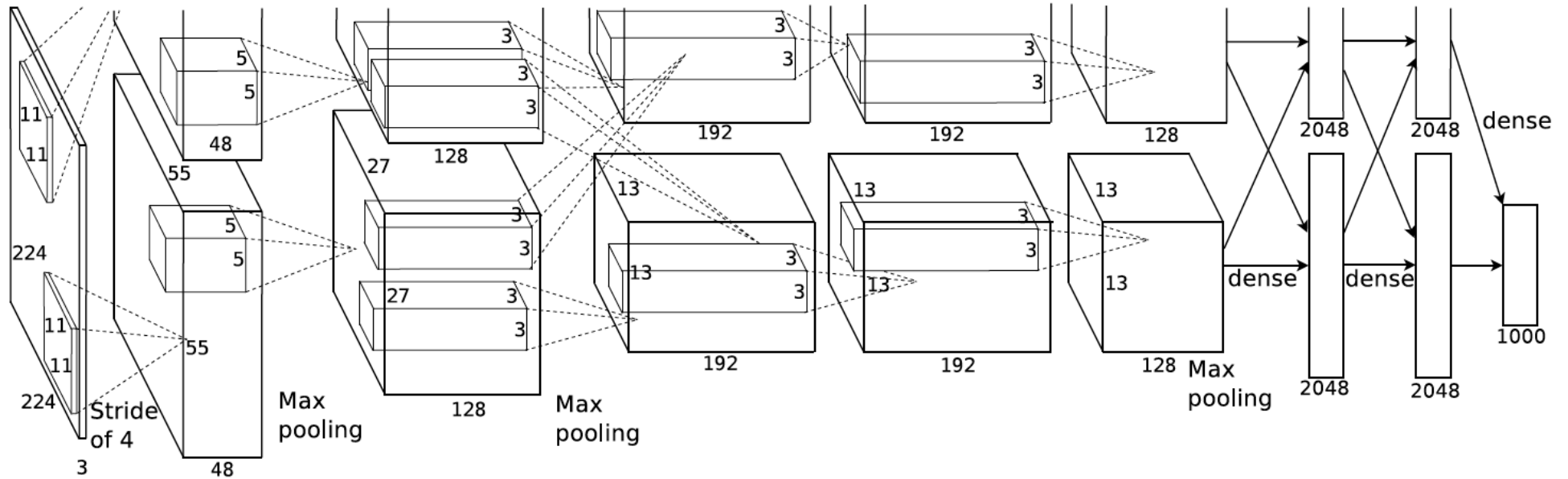**Chapter**   01. 인공지능 개념 이해

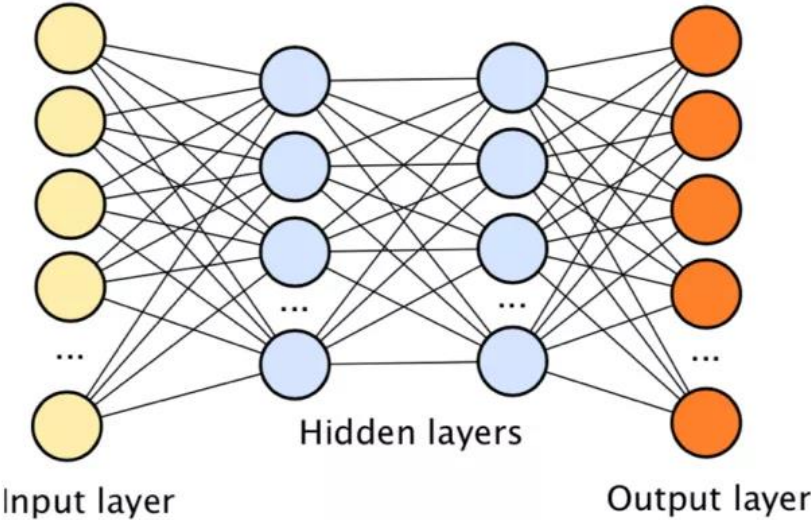# 딥러닝 용어

Model

https://www.researchgate.net/figure/Structures-of-AlexNet-top-and-structure-of-our-system-with-part-of-AlexNet-applied-as_fig1_314200586
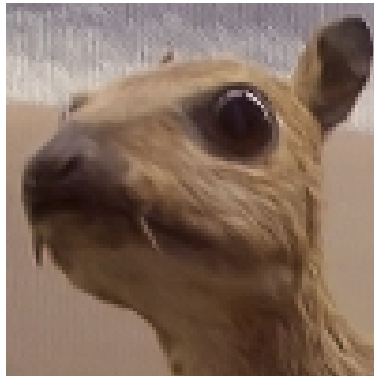
Layer

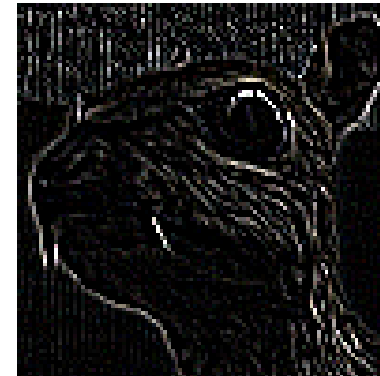deep learning CNN model: VGG16'
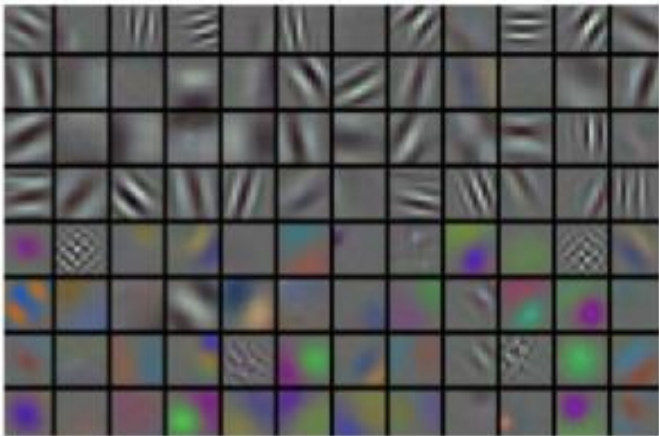
Convolution

Input image

Convolution Kernel

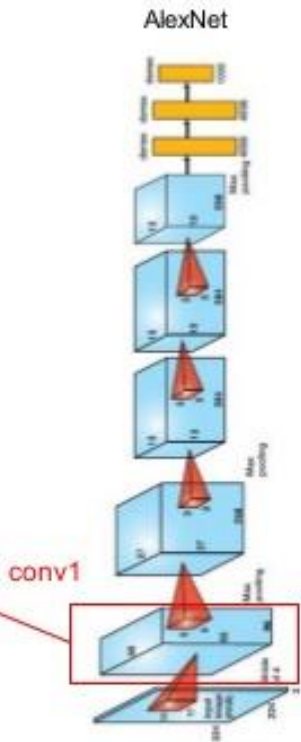$$\begin{bmatrix} -1 & -1 & -1 \\ -1 & 8 & -1 \\ -1 & -1 & -1 \end{bmatrix}$$

Feature map

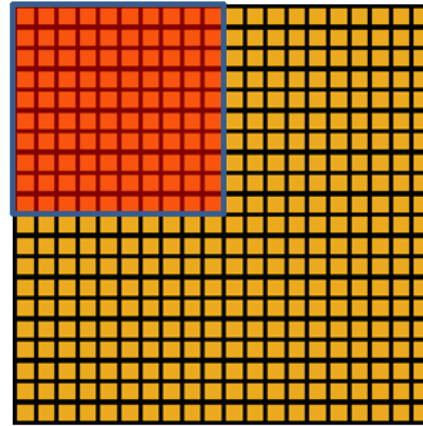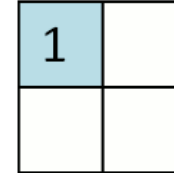# Weight / Filter / Kernel / Variable / Bias

Pooling Layer

Convolved feature

Pooled feature

Optimization
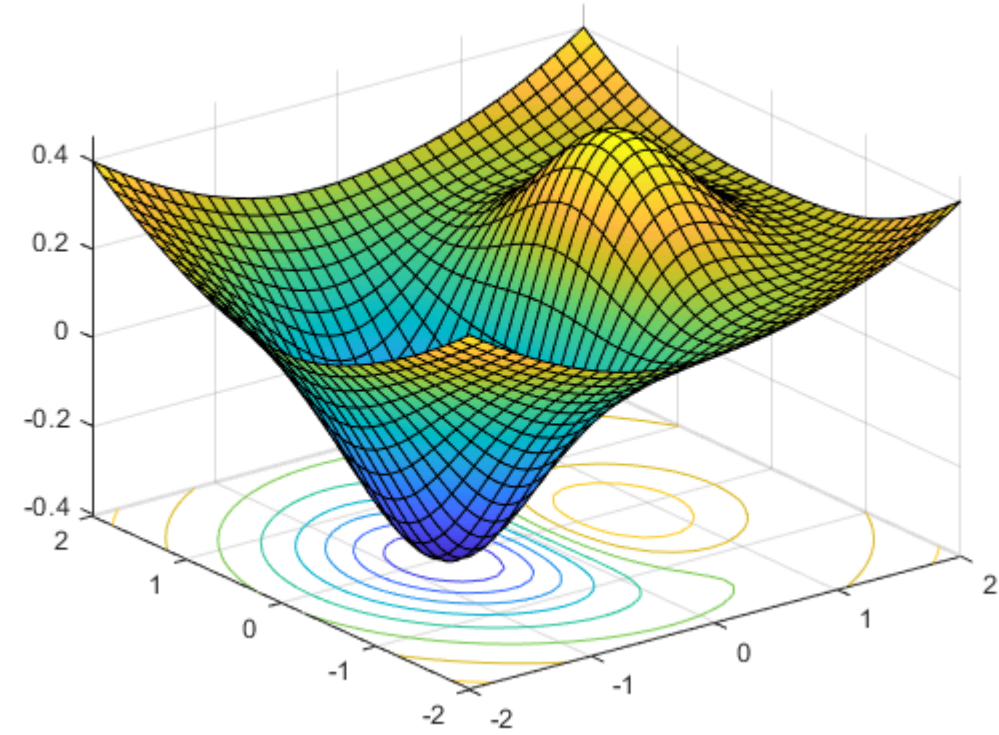
Activation Function

Softmax
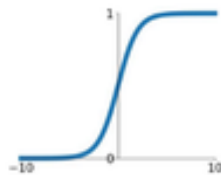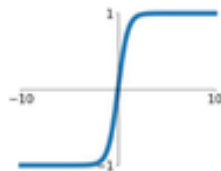
https://medium.com/data-science-bootcamp/understand-the-softmax-function-in-minutes-f3a59641e86d
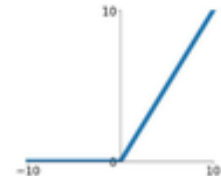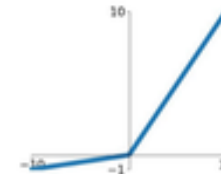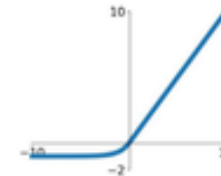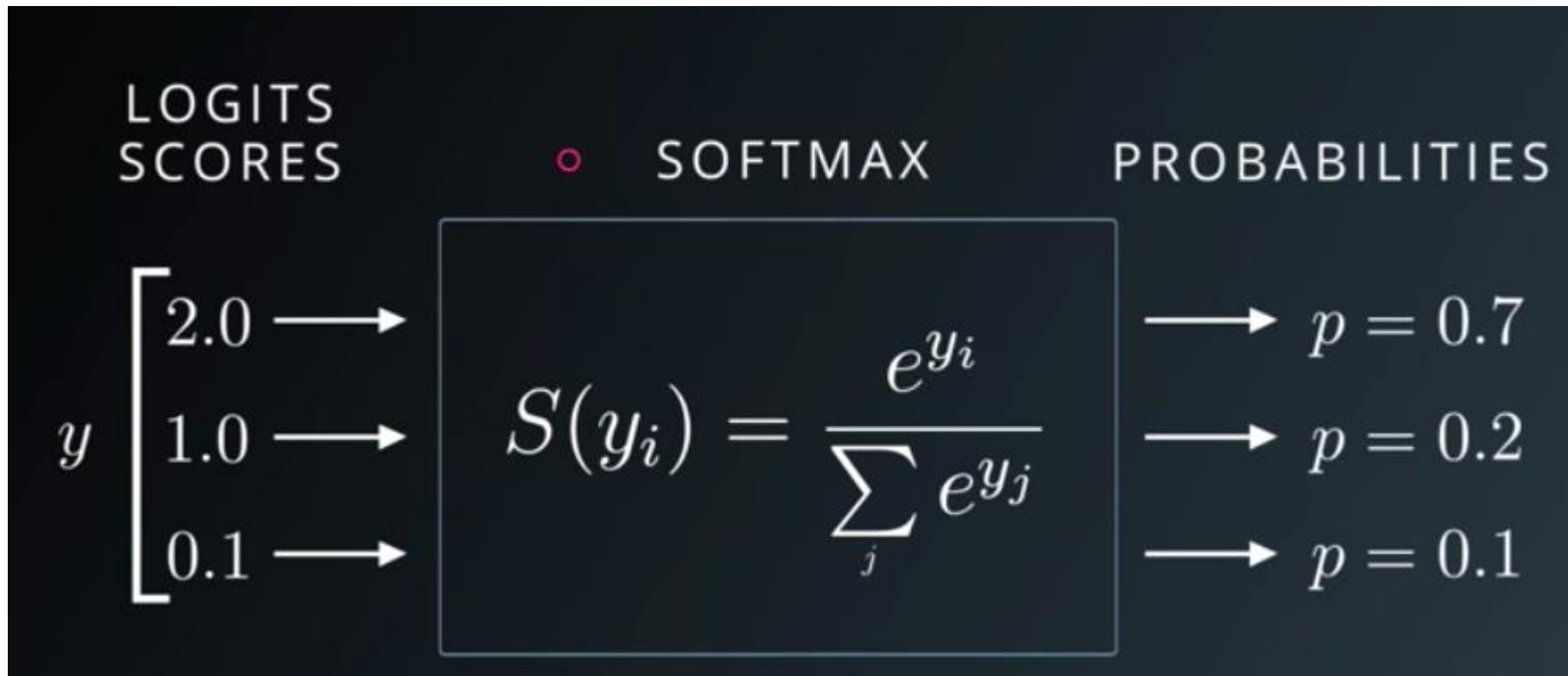
Cost / Loss / Loss Function

Learning Rate

Too low

A small learning rate requires many updates before reaching the minimum point

Just right

The optimal learning rate swiftly reaches the minimum point

Too high

Too large of a learning rate causes drastic updates which lead to divergent behaviors

https://medium.com/octavian-ai/how-to-use-the-learning-rate-finder-in-tensorflow-126210de9489
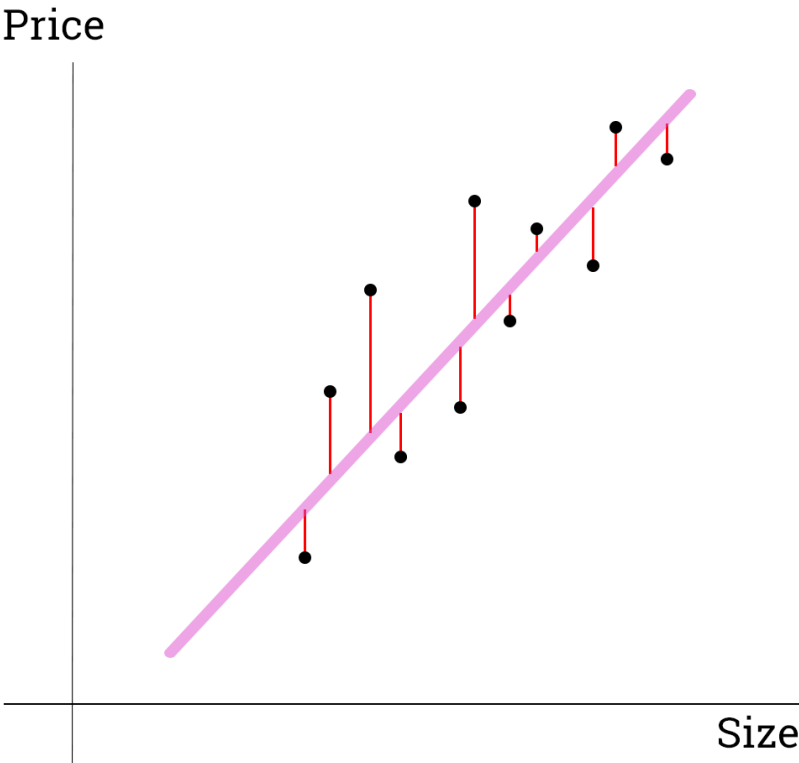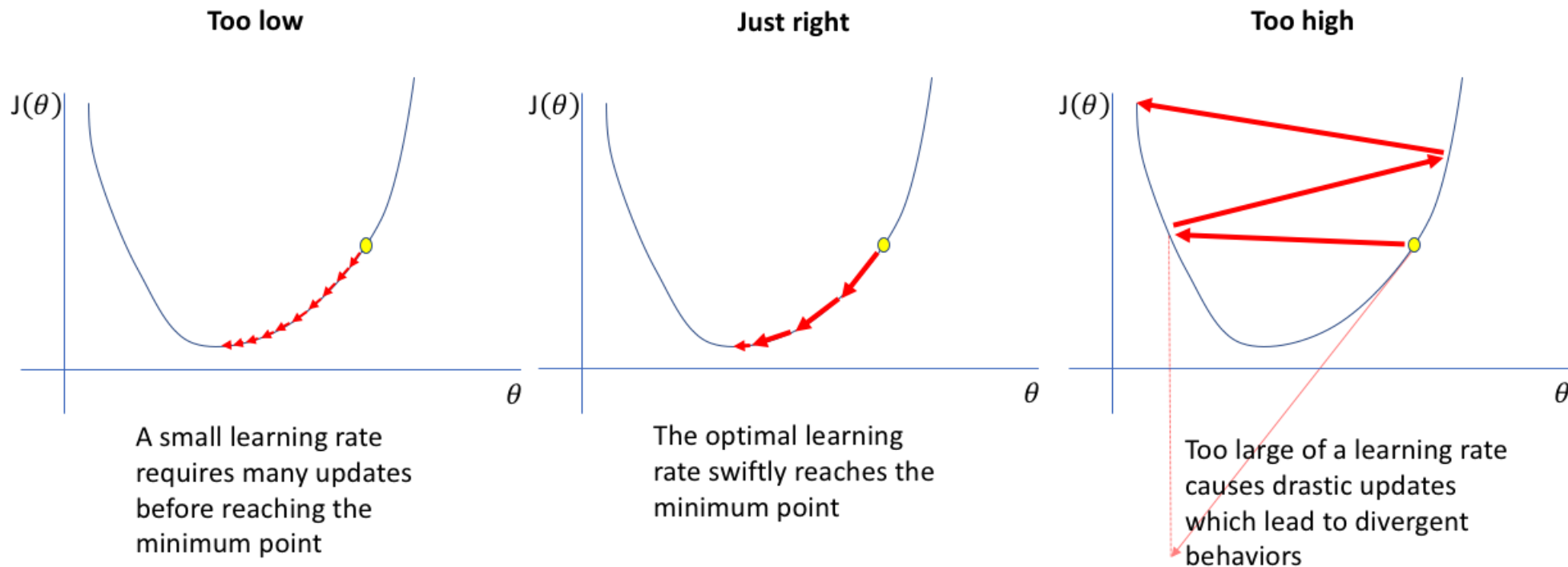
Batch Size

Epoch / Step

Train / Validation / Test
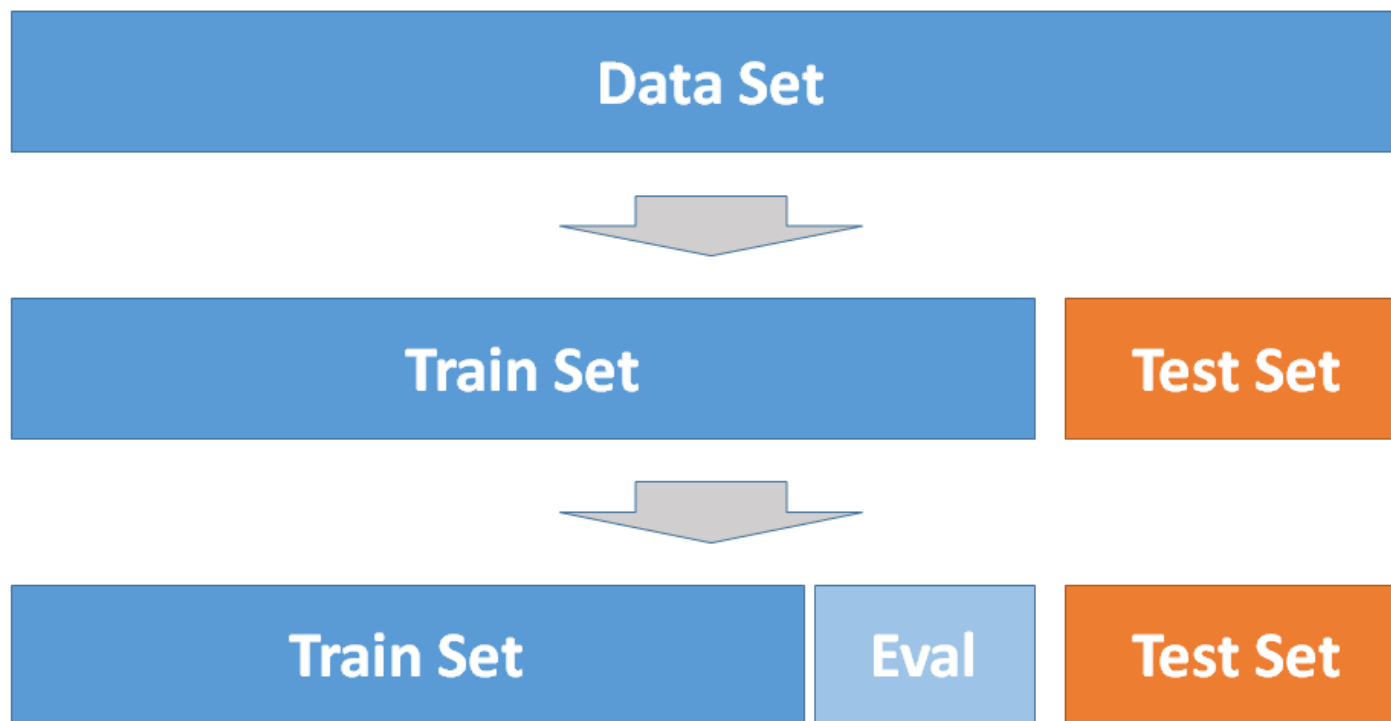
Label / Ground Truth
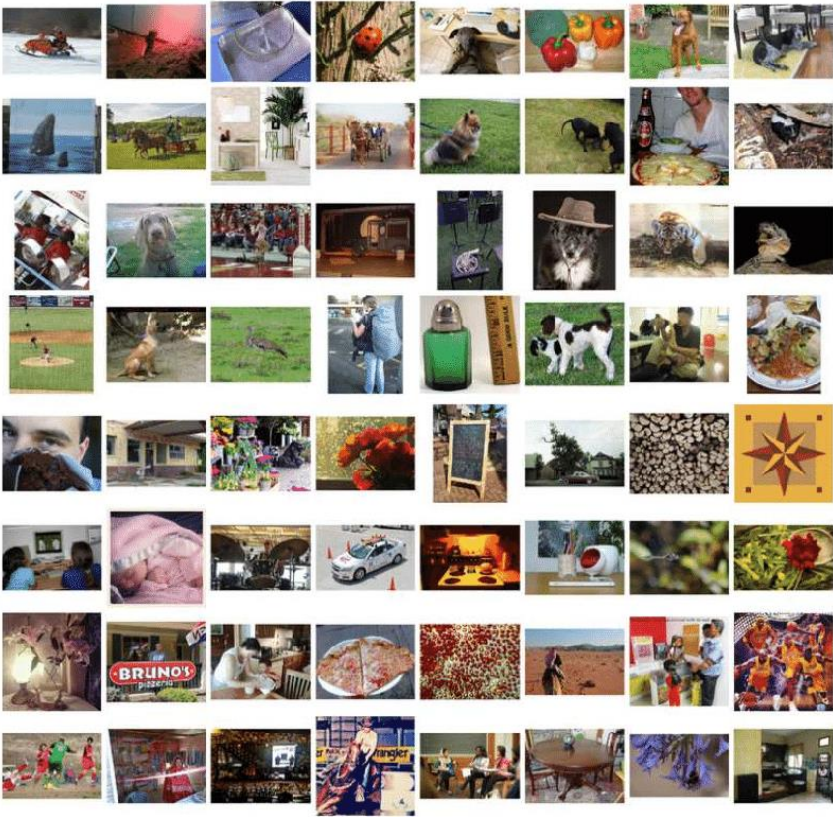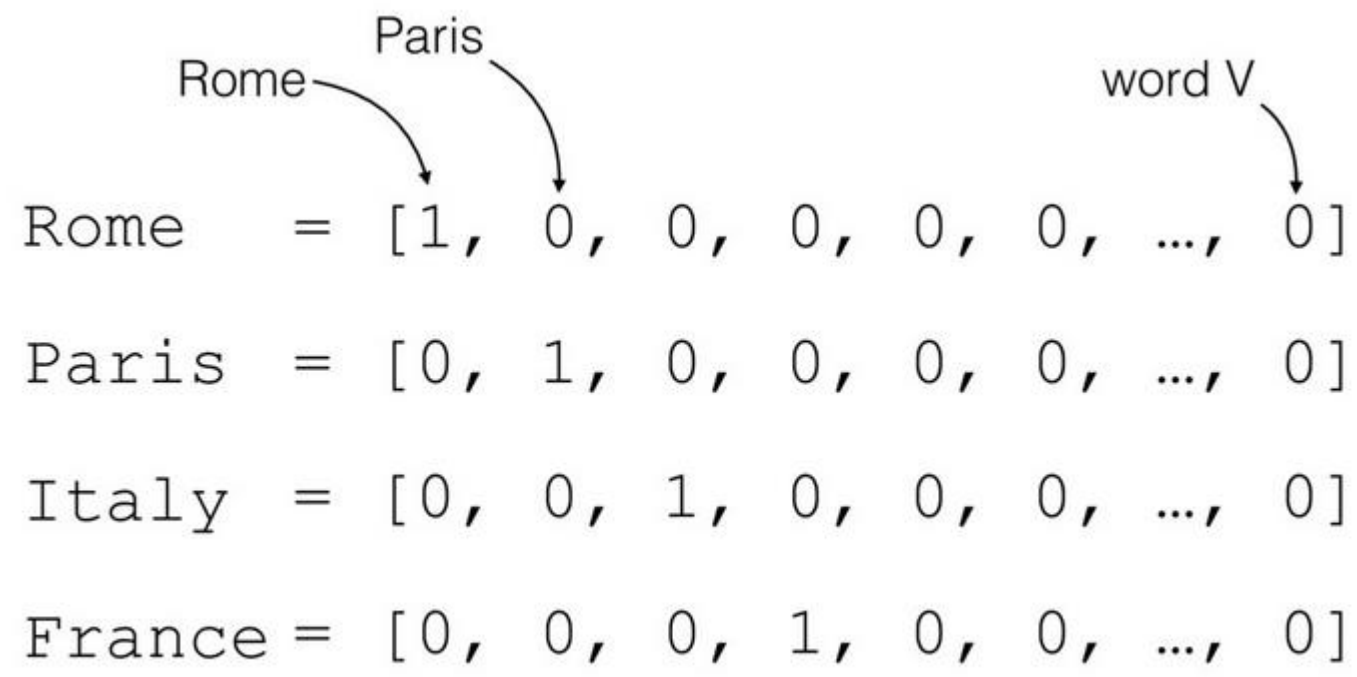
Class

$$
\begin{aligned}
\text{Rome} &= [1, \ 0, \ 0, \ 0, \ 0, \ 0, \ ..., \ 0] \\
\text{Paris} &= [0, \ 1, \ 0, \ 0, \ 0, \ 0, \ ..., \ 0] \\
\text{Italy} &= [0, \ 0, \ 1, \ 0, \ 0, \ 0, \ ..., \ 0] \\
\text{France} &= [0, \ 0, \ 0, \ 1, \ 0, \ 0, \ ..., \ 0]
\end{aligned}
$$

Chapter   01. 인공지능 개념 이해

감사합니다