

Digital Talent Scholarship 2022

Machine Learning

Lead a sprint through the Associate Cloud Engineer Track

Agenda

- What is Convolution Neural Network ?
- How CNN Works ?
- What is Convolutions and pooling ?
- How to handle complex images ?

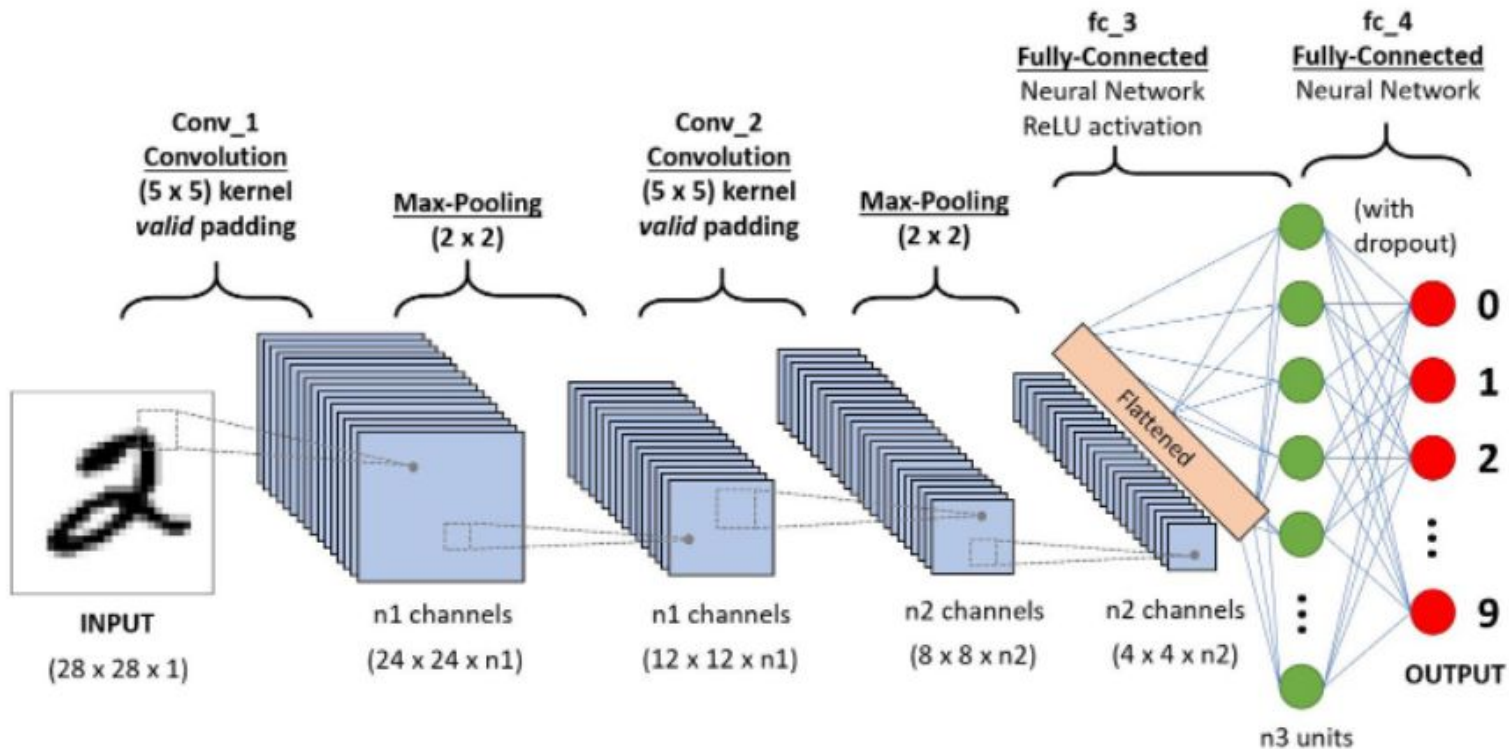
Are your students ML-ready?

Recap

What Is Convolutional Neural Network

CNN atau bisa disebut sebagai Convolution Neural Network merupakan bagian dari AI.

CNN merupakan bagian dari Deep Learning



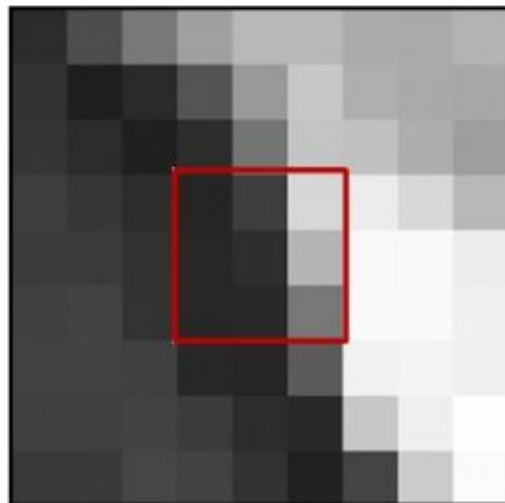
Convolutions is about Filter !

Input image

1	1	1	0	0
0	1	1	1	0
0	0	1	1	1
0	0	1	1	0
0	1	1	0	0

Filter

1	0	1
0	1	0
1	0	1



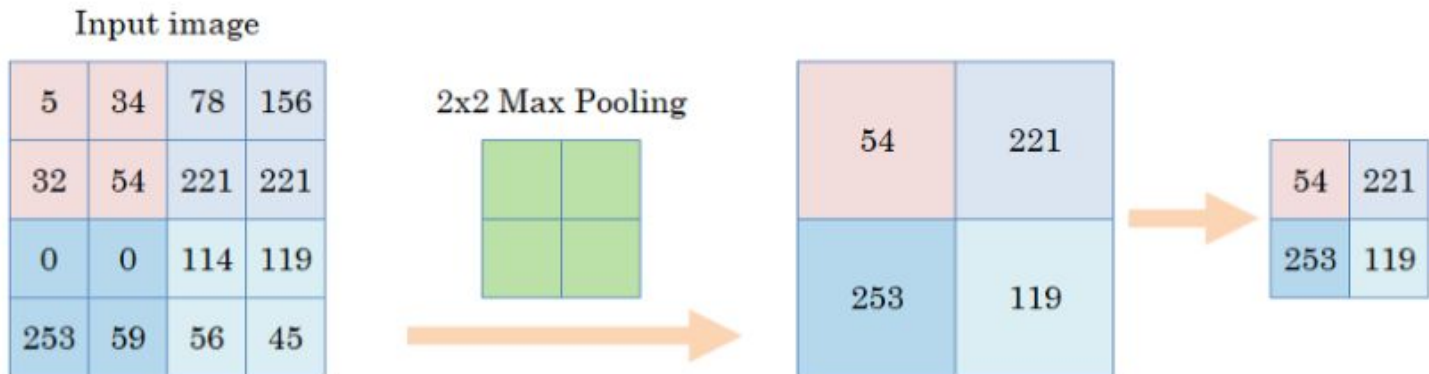
Source

43	102	169
35	58	191
38	44	155

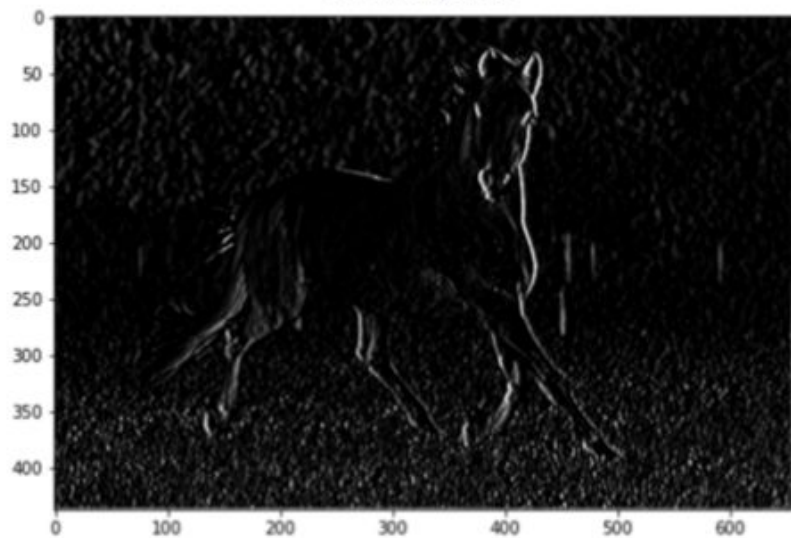
1x1	1x0	1x1	0	0
0x0	1x1	1x0	1	0
0x1	0x0	1x1	1	1
0	0	1	1	0
0	1	1	0	0

4		

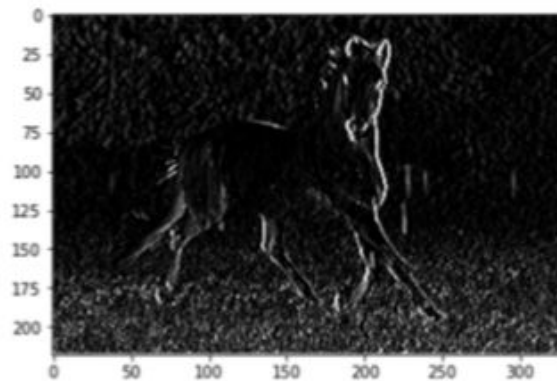
Lalu Apa itu Pooling ?



Vertical edge filter



2x2 Max Pooling



<https://www.youtube.com/watch?v=QzY57FaENXg>

(1) Simple explanation of convolutional neural network | Deep Learning Tutorial 23 (Tensorflow & Python) - YouTube

(1) Image classification using CNN (CIFAR10 dataset) |
Deep Learning Tutorial 24 (Tensorflow & Python) - YouTube

Dataset :

<https://www.kaggle.com/datasets/drgfreeman/rockpaperscissors>

Thank you