Image normalization for ML processing
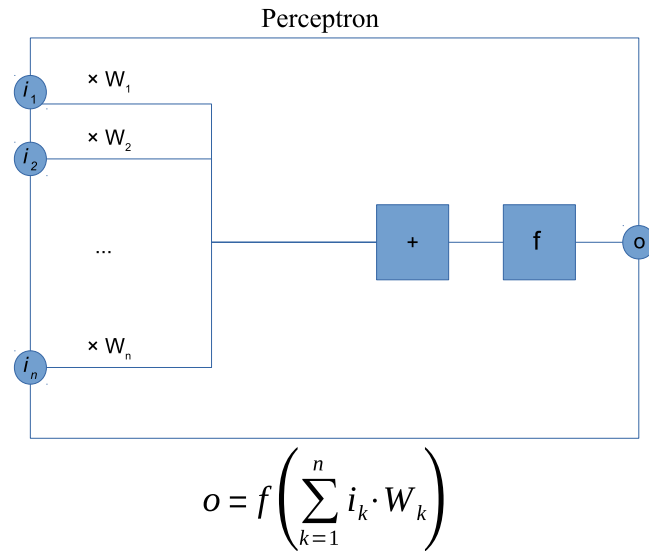
by @pospanet

Perceptron

X_1

W_1

X_2

W_2

ξ

Z

W_n

X_n

Θ

- X … input
- W … weight
- θ … Bias

https://cs.wikipedia.org/wiki/Perceptron

Perceptron

$$o = f\left(\sum_{k=1}^{n} i_k \cdot W_k\right)$$
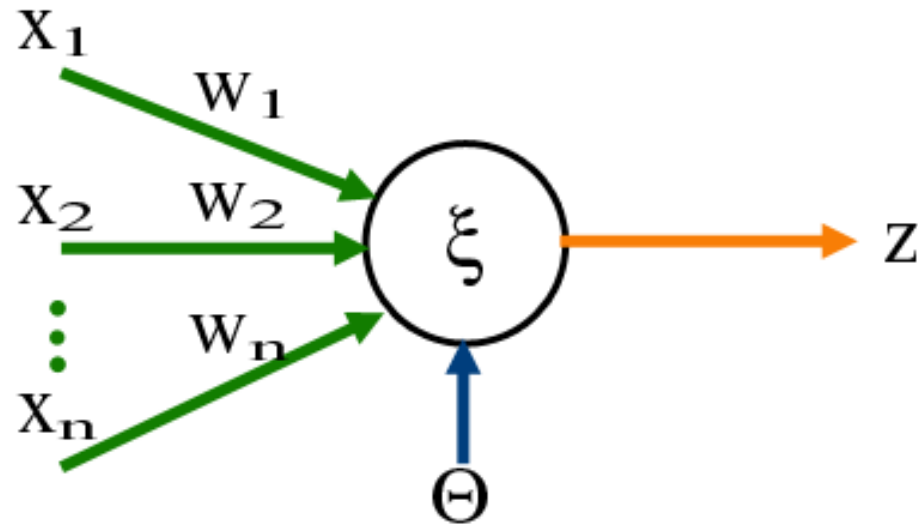
- X … input
- W … weight
- f … activation function

- O … output

Why image normalization

- Data "distance" is to small not using whole spectrum
- Can you guess what is on the picture on the right?
- Noisy information

Original image

Normalized (for humans)

Original image

Normalized image (for computer visio)

Python demo

By Jupyter notebook