Inside Neural Network

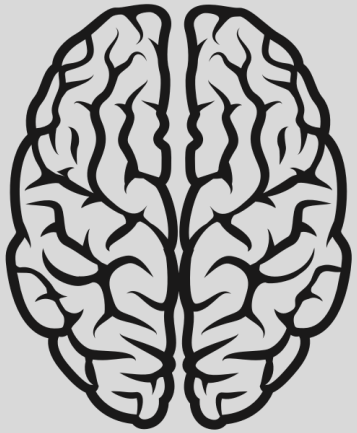
Mathematical Insights

Kya hai Deep Learning?

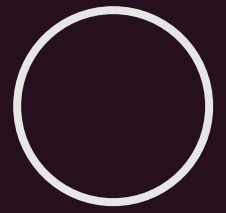
Subfield of Machine Learning

Inspired by

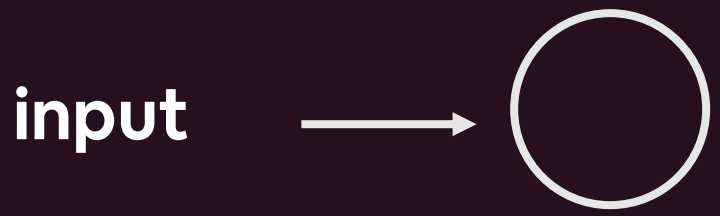
Structure and Functioning



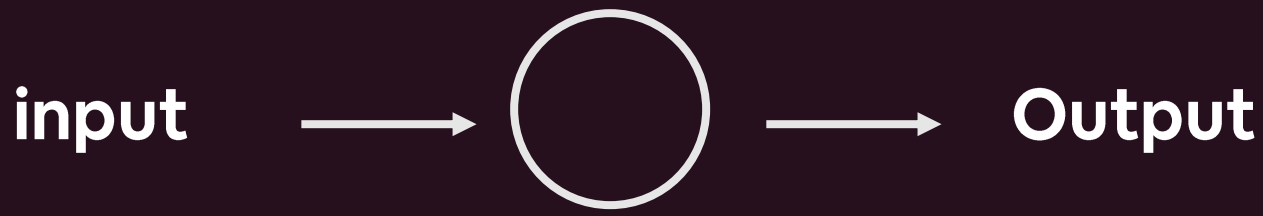
Artificial Neural Network



Neuron



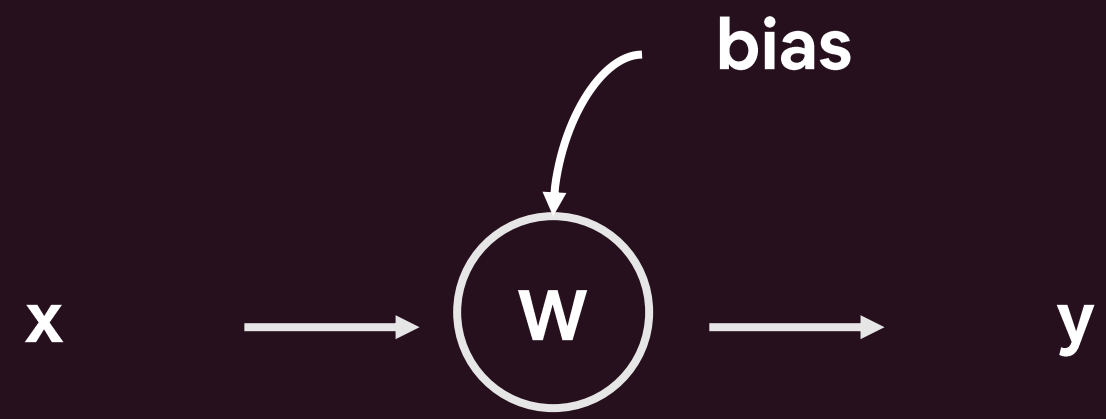
Neuron



Neuron

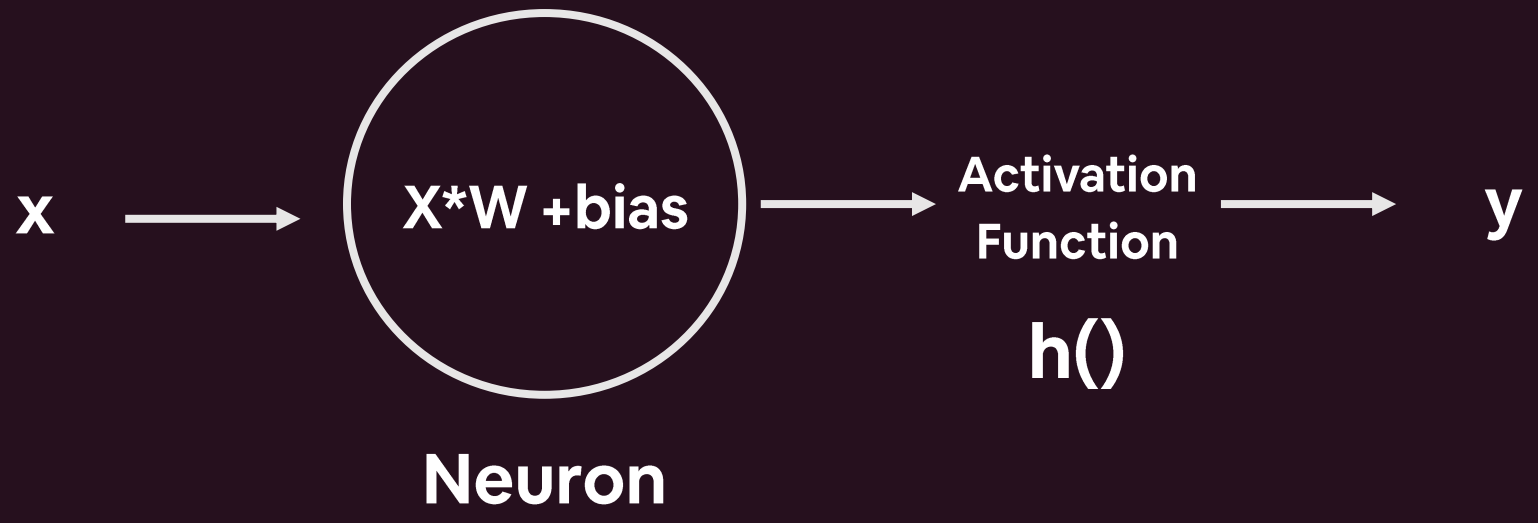
Neuron

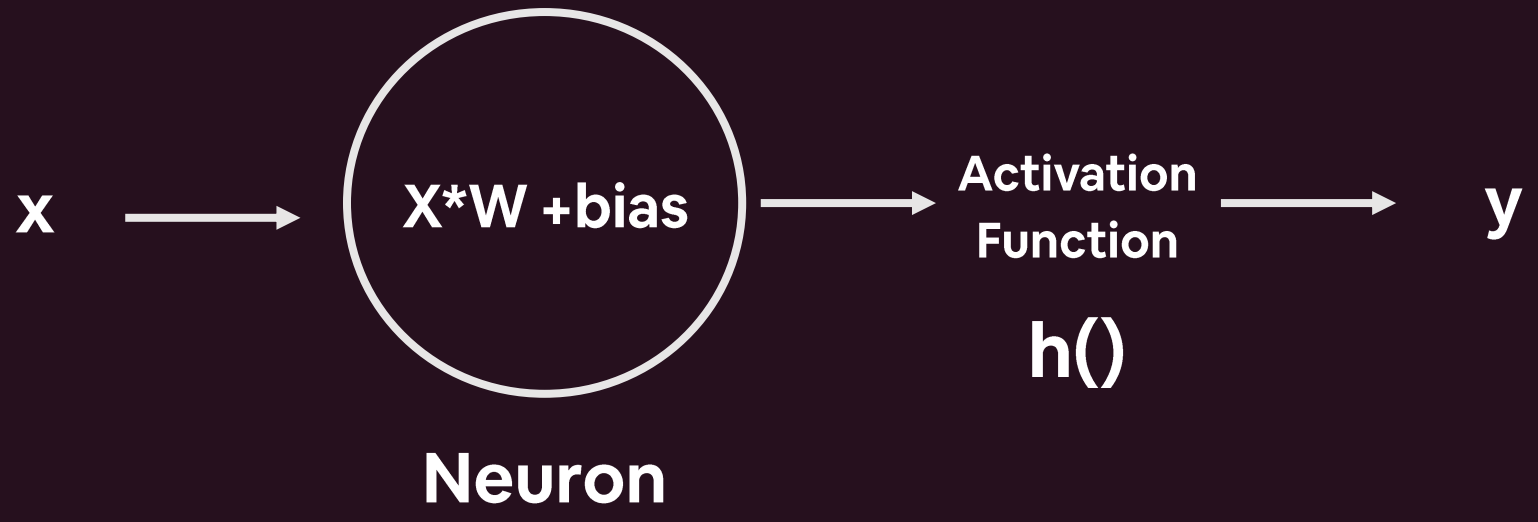
Neuron



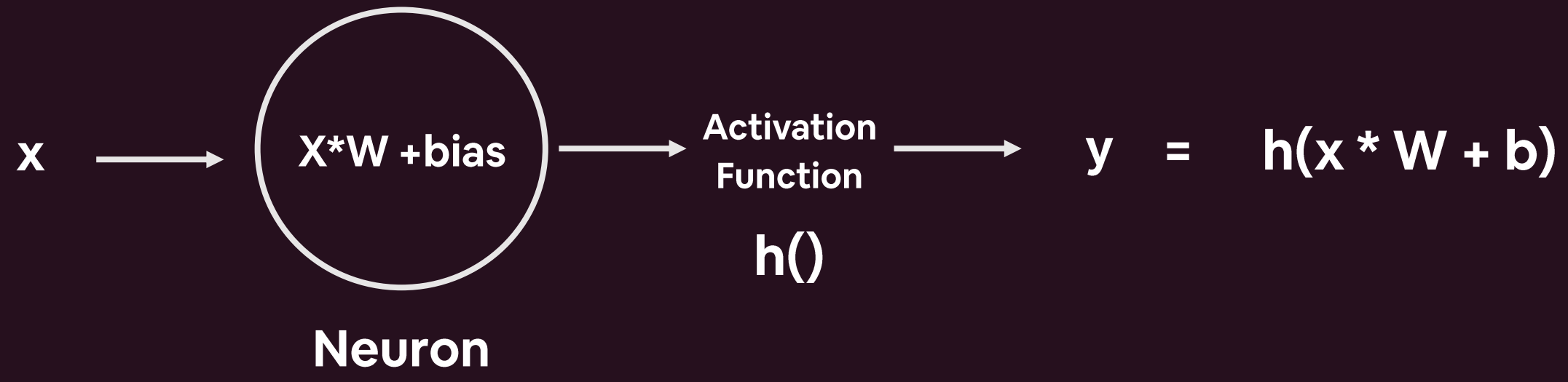
Neuron

Neuron


x
X*W +bias
Activation
Function
h()
y
Neuron



h() can be any linear or non-linear function

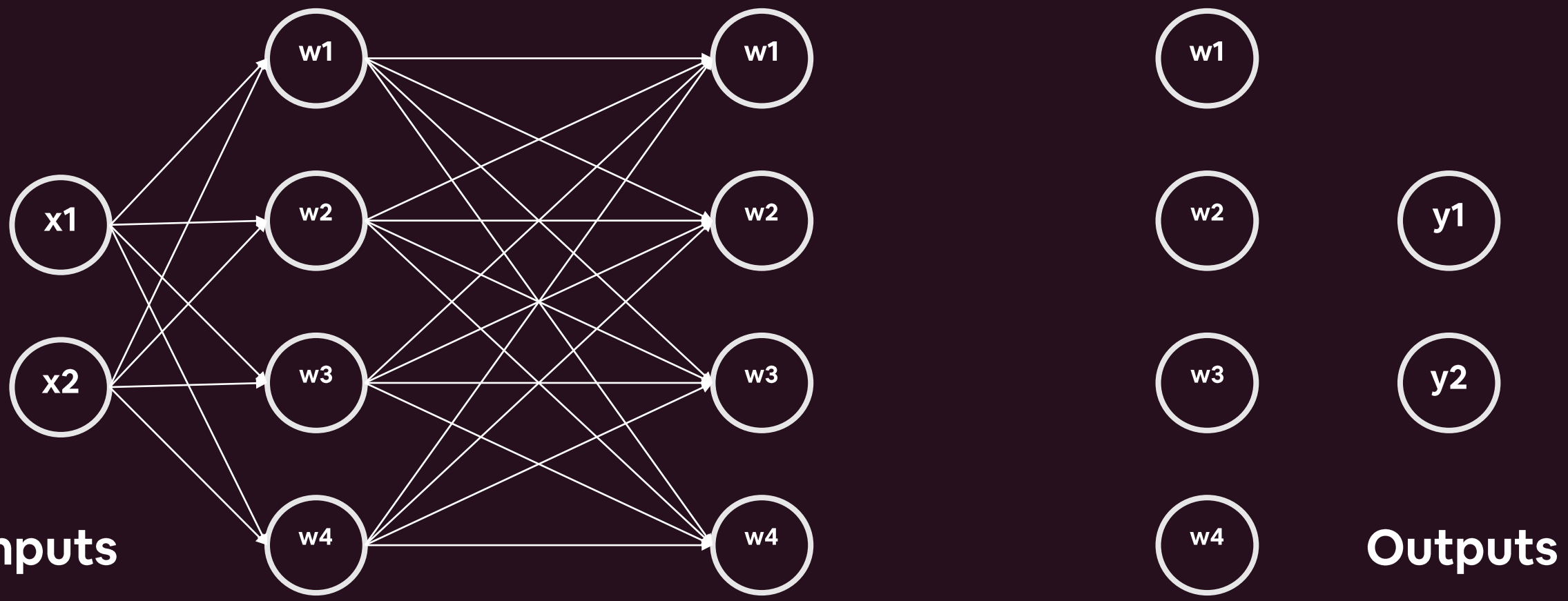


h() can be any linear or non-linear function

Layer

Layer


w1
w2
w3
w4
w1
w2
w3
w4
w1
w2
w3
w4
Layer 1
Layer 2
...
Layer n


x1
x2
w1
w2
w3
w4
w1
w2
w3
w4
w1
w2
w3
w4
y1
y2
Inputs
Outputs
Layer 1
Layer 2
...
Layer n

Activation Function

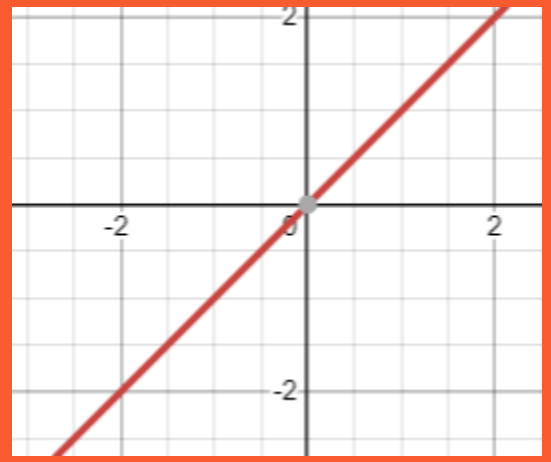
Activation Function

Linear

Non - Linear

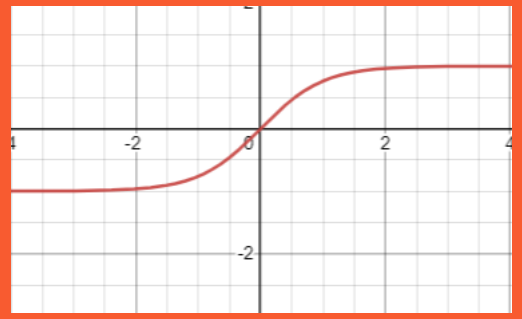
Activation Function

Linear

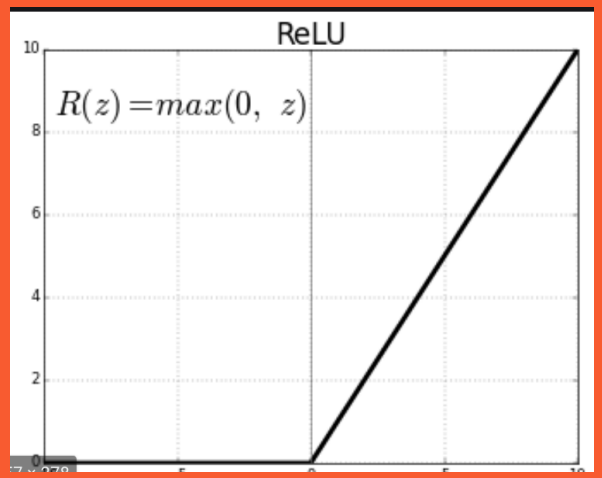


y = x

Non - Linear



tanh(x)



ReLU(x)

Next Video:

- Getting started with PyTorch
- Behaviour of Deep Learning Model