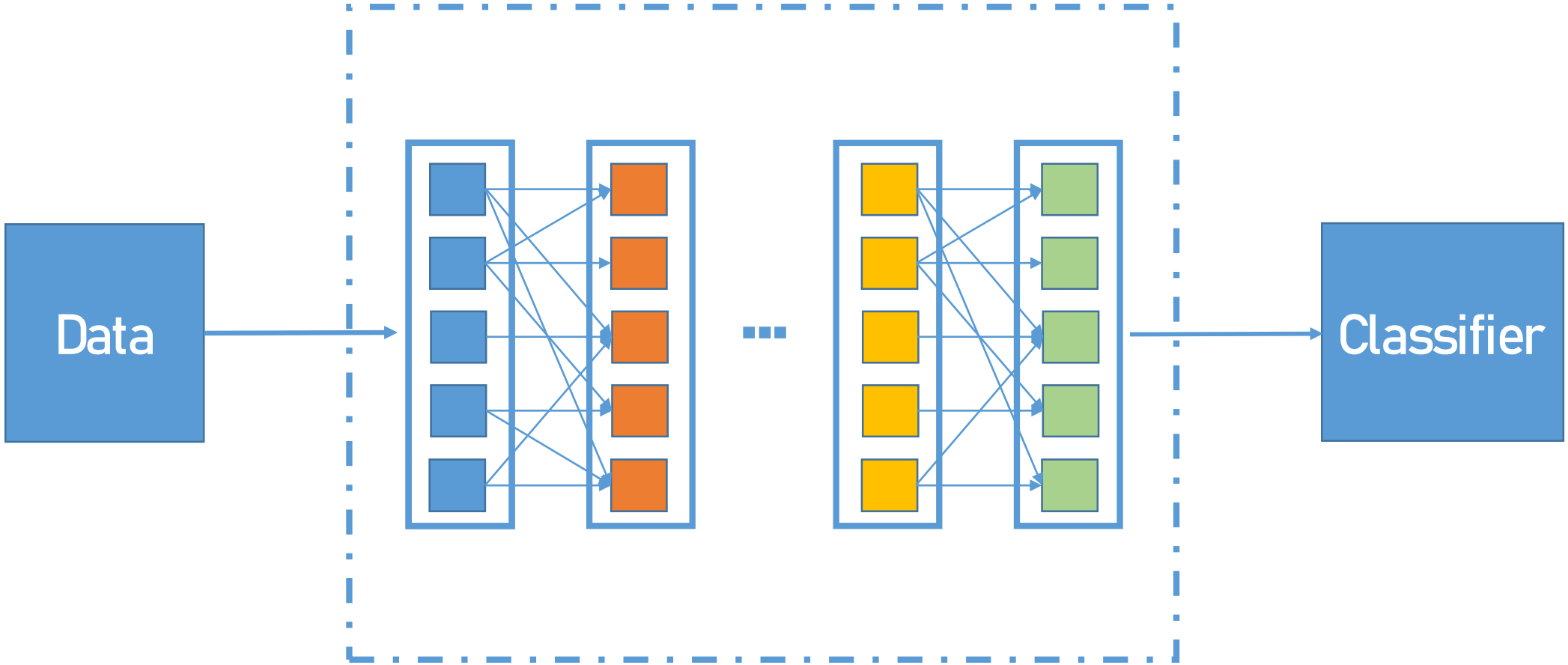
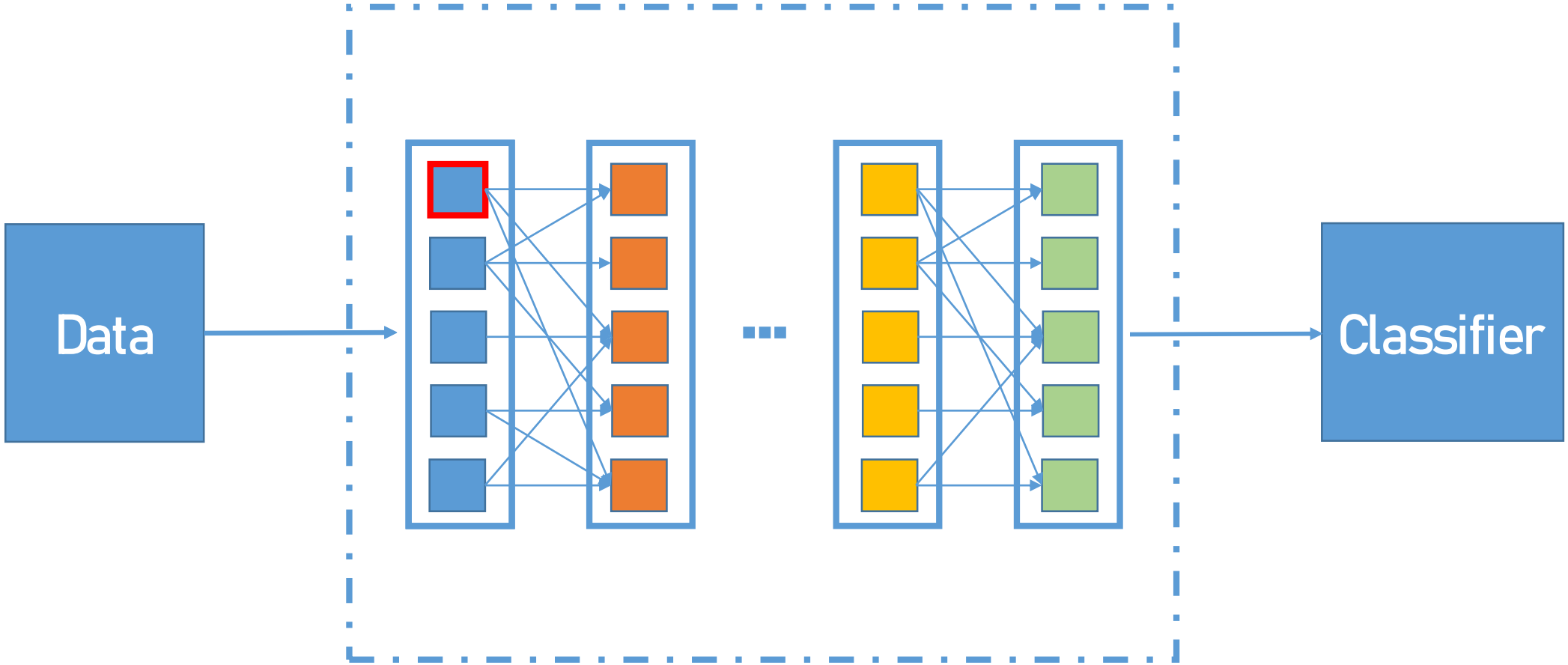
# What is a Neuron?

# Neural Networks Architecture




Each layer consists of
interconnected neurons

# Neural Networks Architecture

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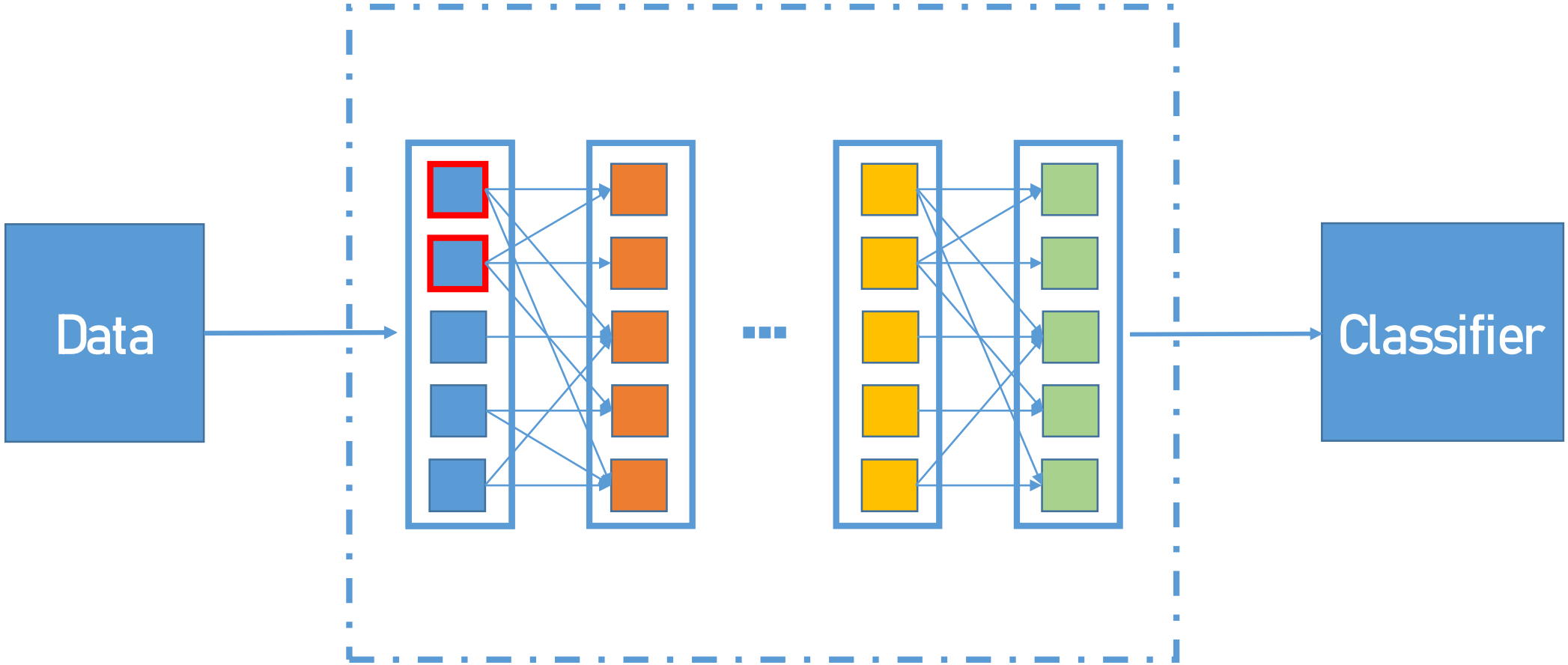
# Neural Networks Architecture

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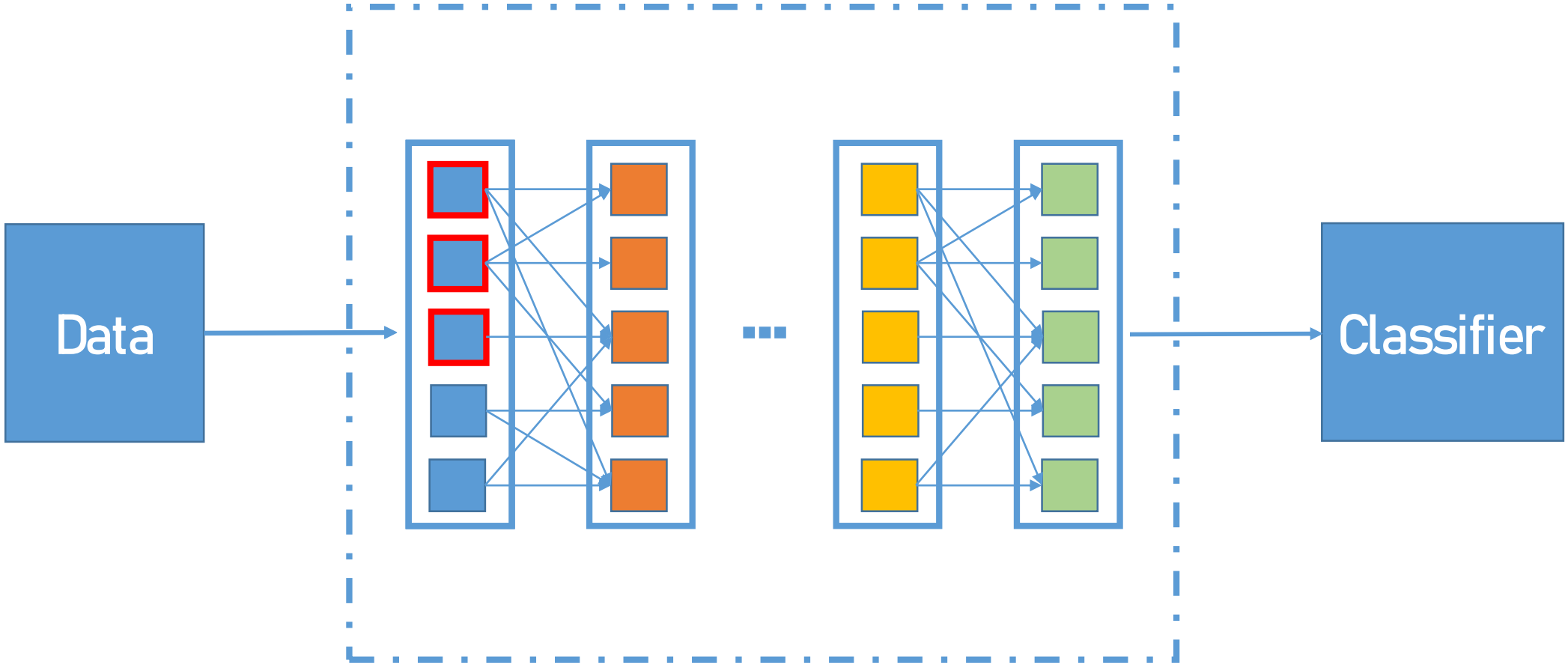
# Neural Networks Architecture

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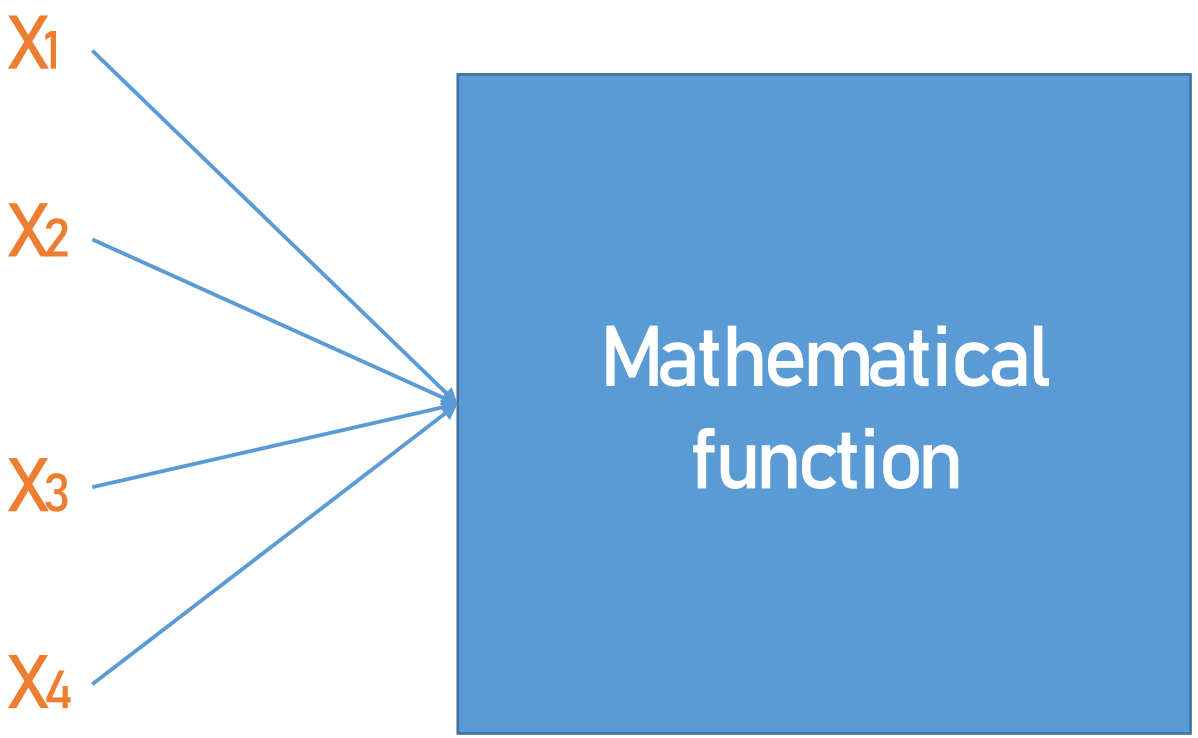
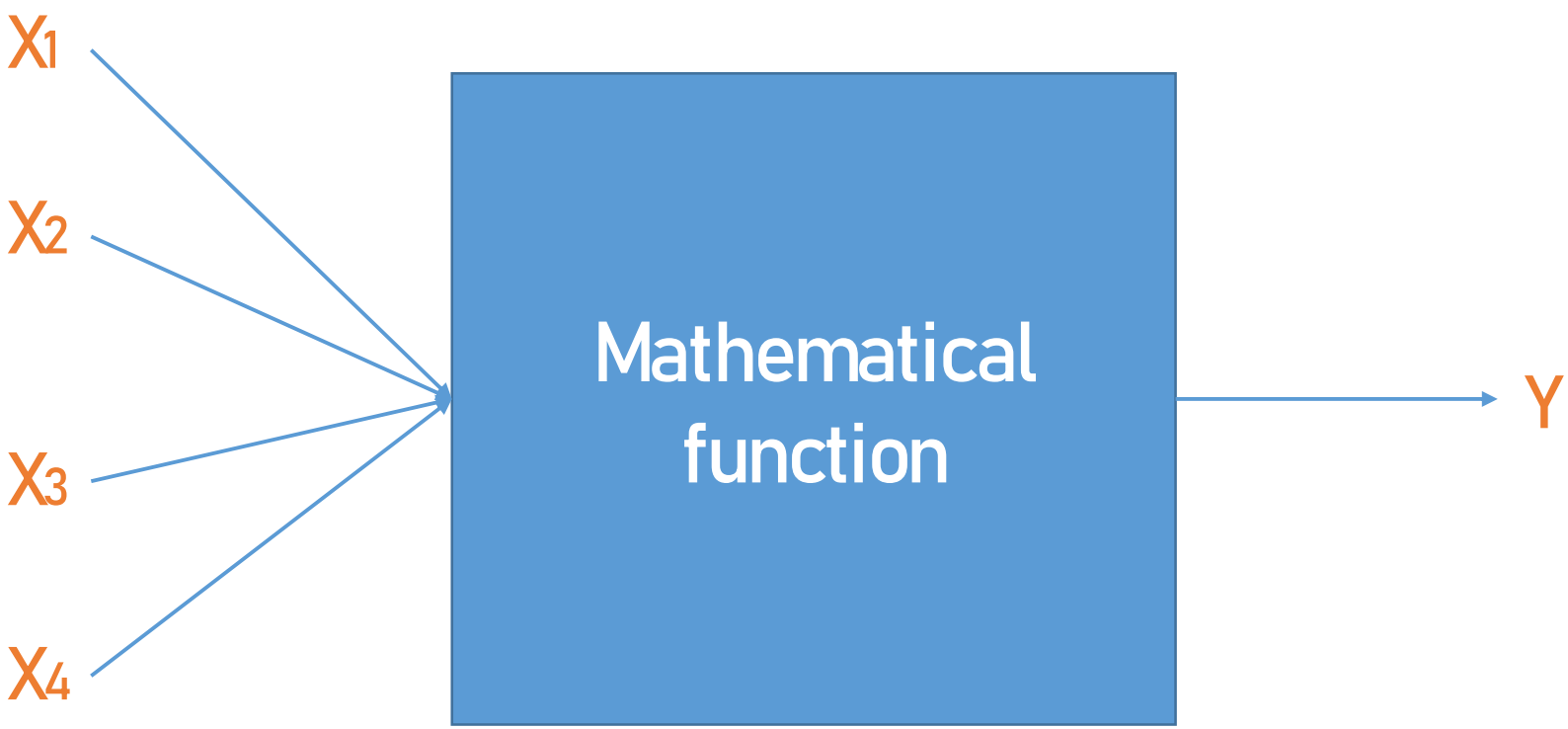
# Understanding a Single Neuron

Mathematical function

# Understanding a Single Neuron




# Understanding a Single Neuron

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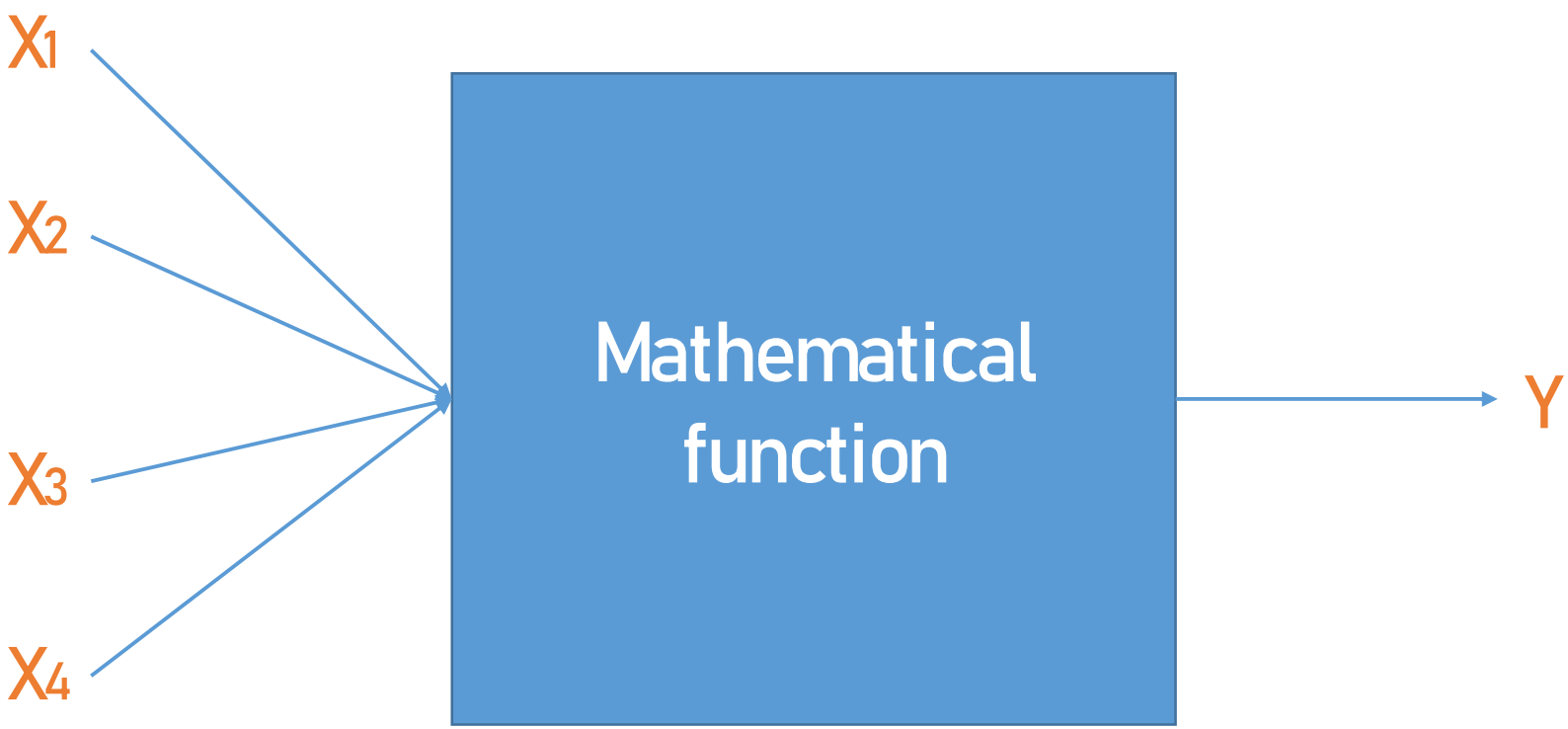
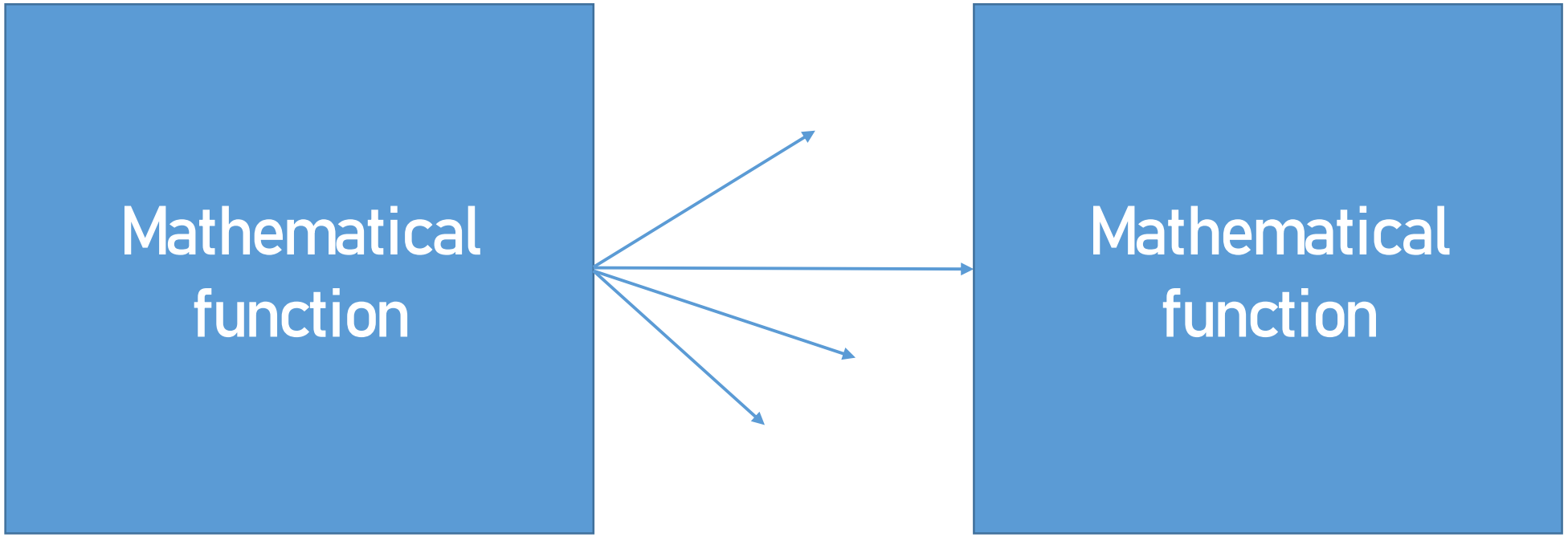


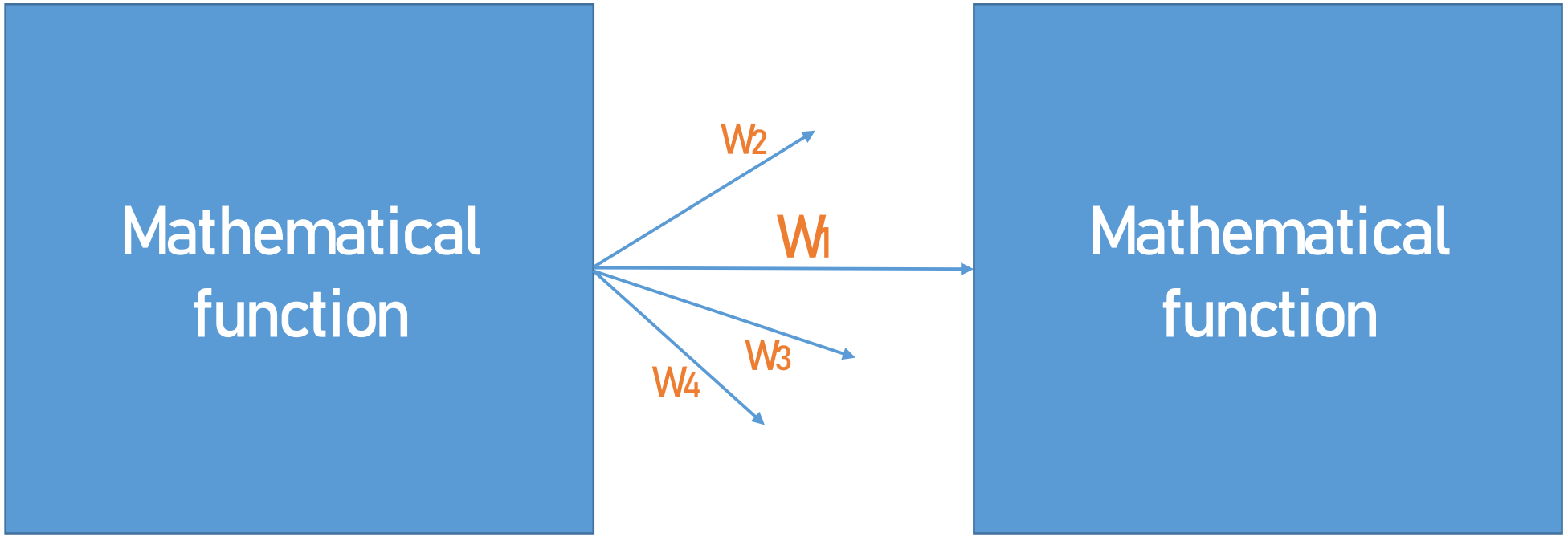

For any change in inputs there should be a change in the outputs

# Understanding a Single Neuron



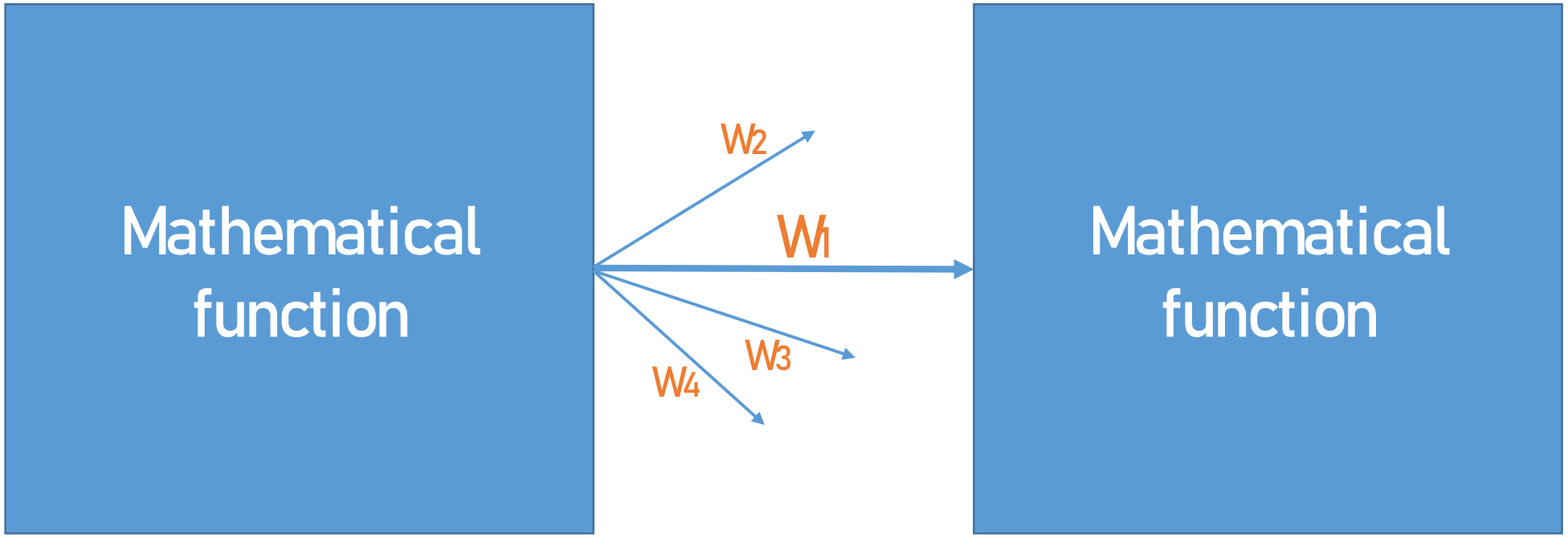

Output of a neuron in **layer N-1** is connected to neurons in **layer N**

# Understanding a Single Neuron



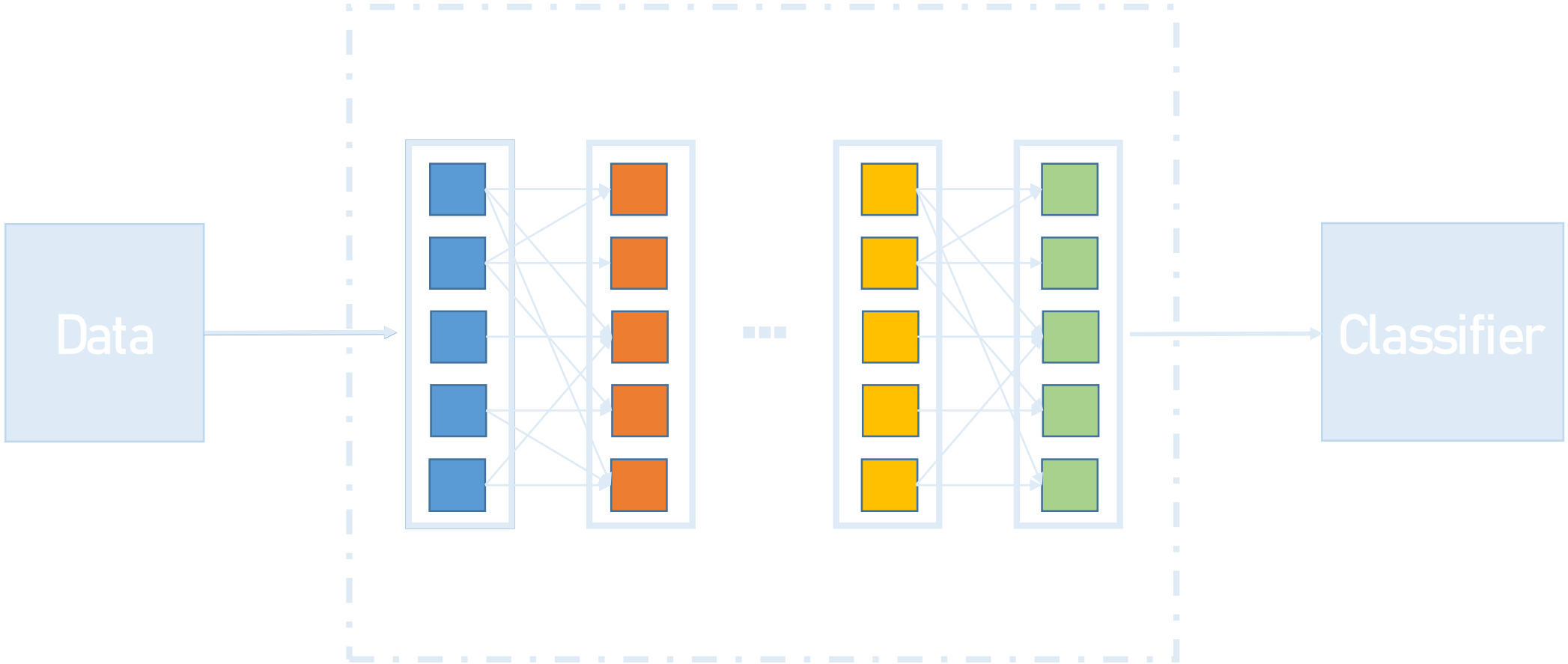

Each connection between neurons contain a weight

# Understanding a Single Neuron



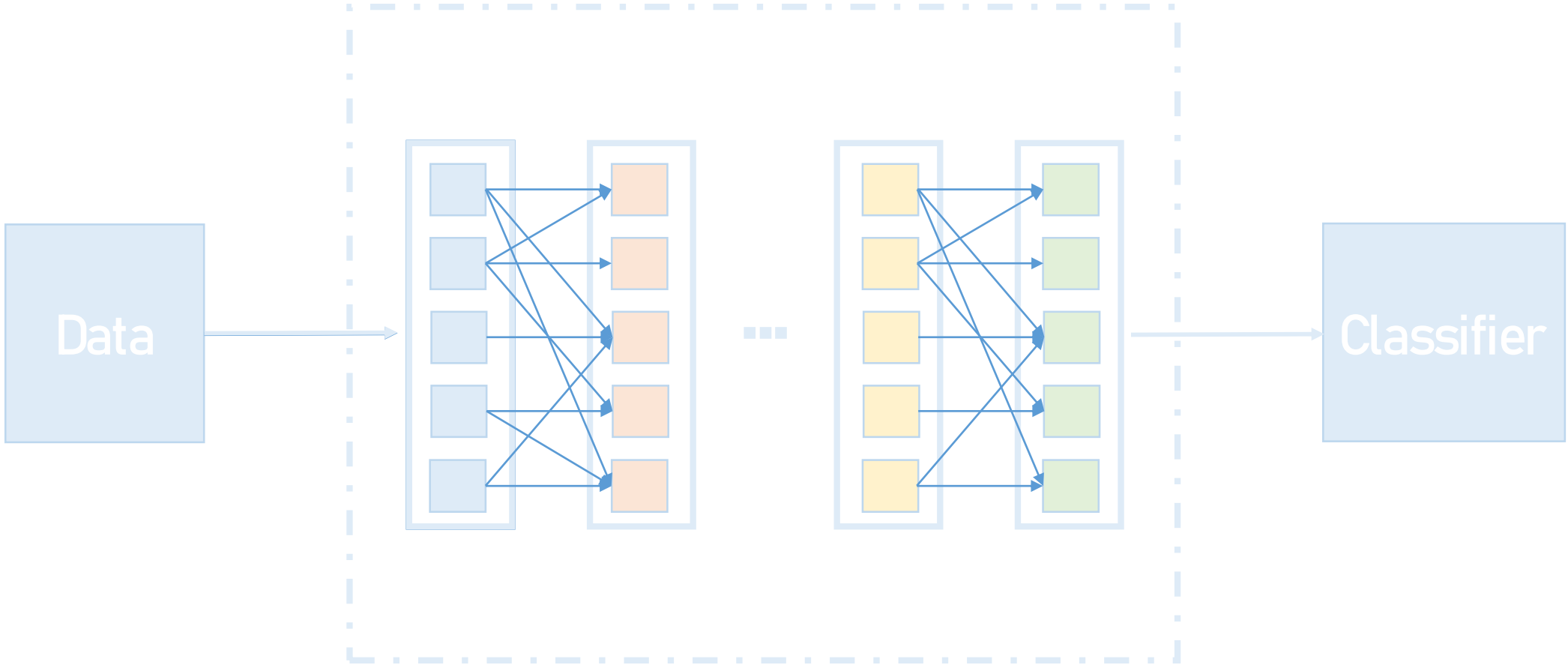

W increases if the connection between two neurons is stronger

# The Computation Graph



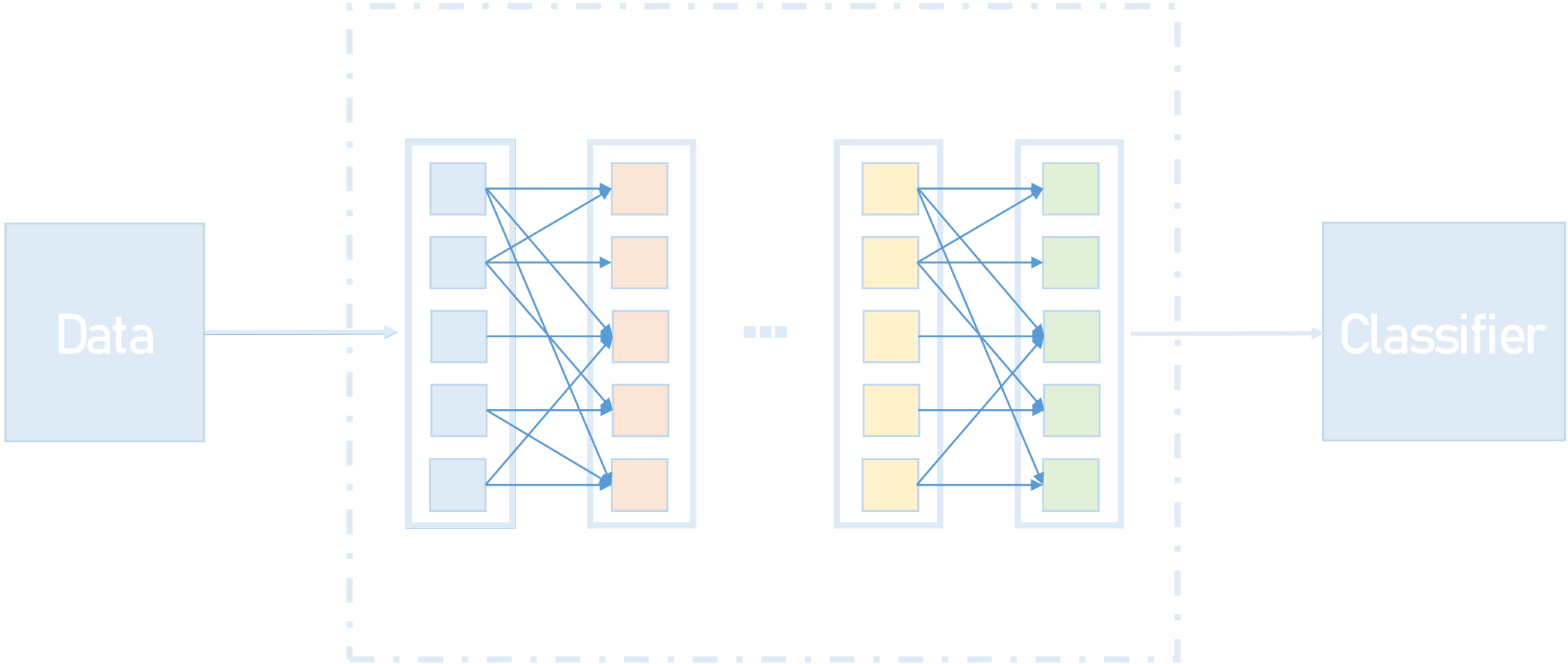

In the computation graph of neural networks, nodes are the neurons

# The Computation Graph




**In the computation graph of neural networks, edges are the tensors**

# The Computation Graph




**Once a neural network is trained the weights associated with edges help in predictions**

# Understanding a Single Neuron