



Connecting Neuroscience and Machine Learning

Don't get Eaten by the Tiger

Neuroscience of Decision Making

The Neuron

What is the basic **unit of information** for a neuron?

Spike

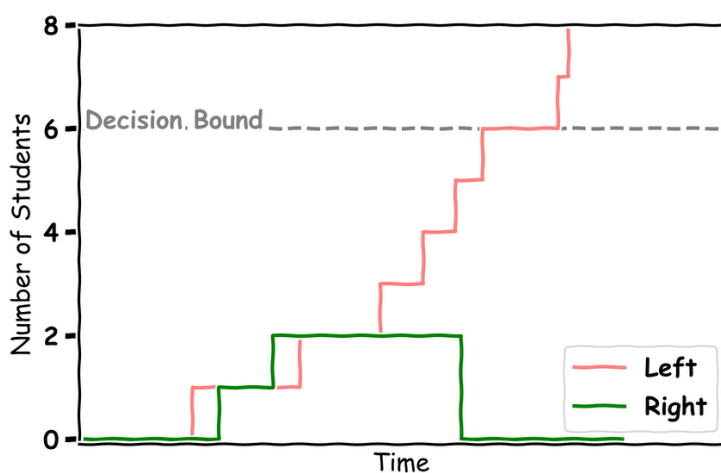
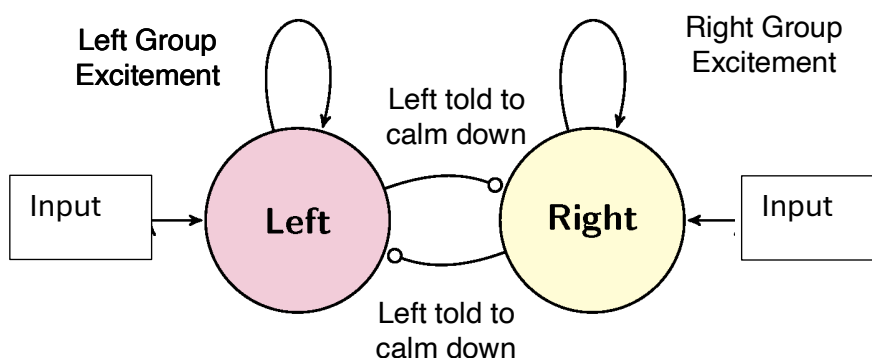


How do we **encode** it mathematically?

0 and 1

Two Populations of Neurons

Label the graph:



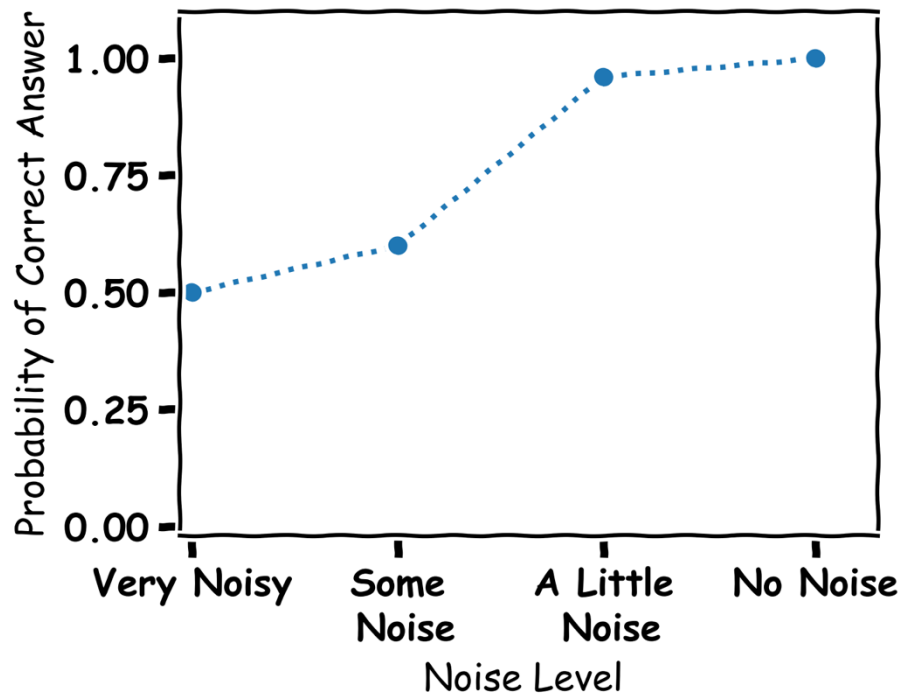


Making Decisions

Label the graph:

Where is the **50-50 chance line**?

Fill in the graph with your answers:





Machine Learning of Decision Making

The Algorithm

What is an **algorithm**? Give an **example**?

An algorithm is a step-by-step set of instructions for solving a problem or performing a specific task.

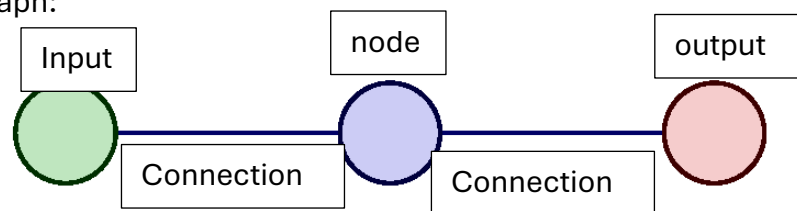
Tik-Tok

What is **Machine Learning**?

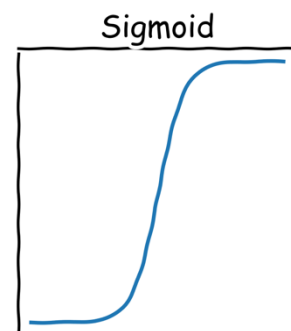
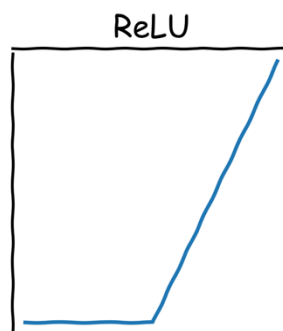
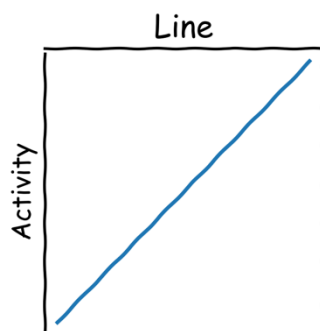
The way computers learn from data

The Node

Label the graph:



Draw the **functions** could be used in a node and what are they good for?



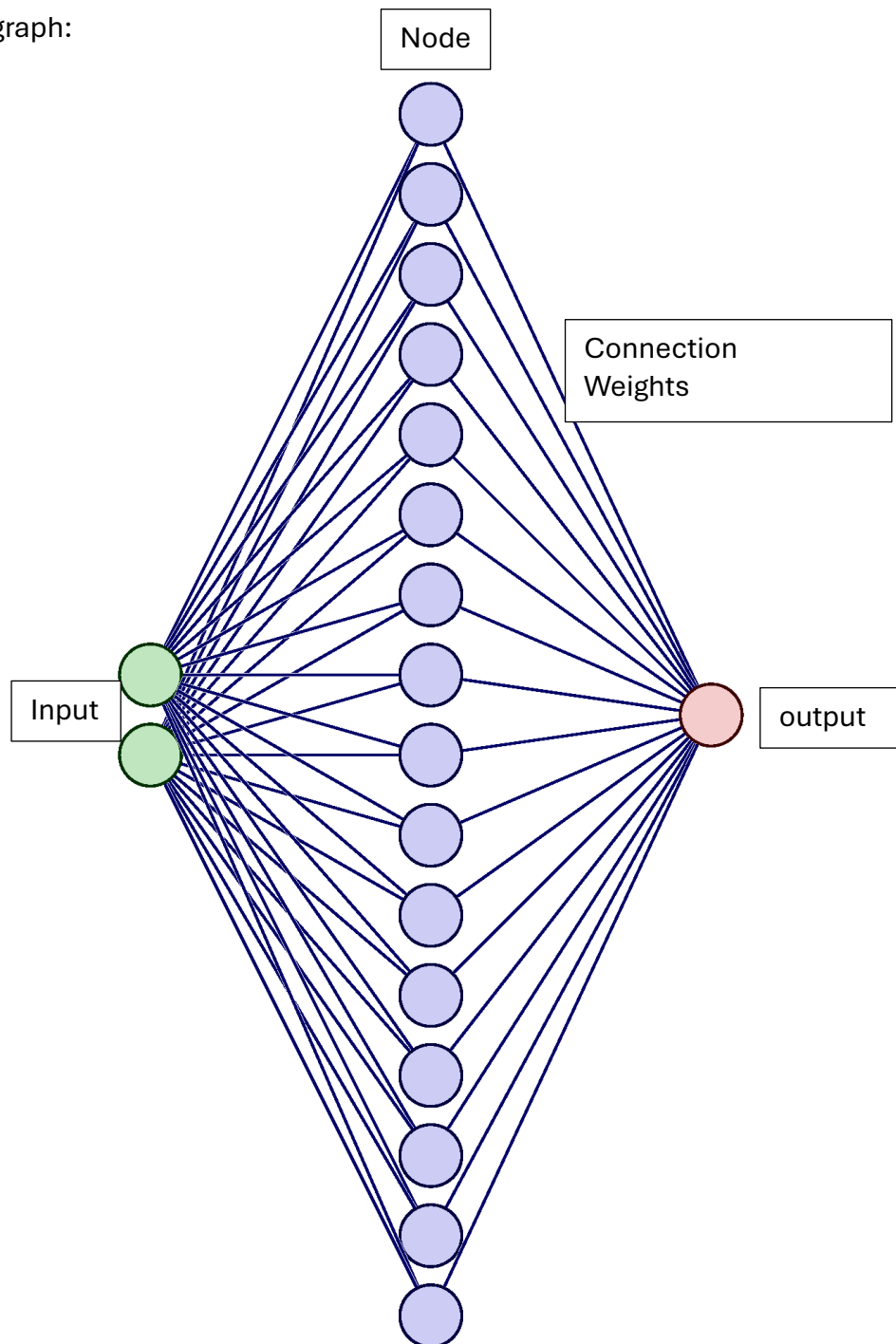
What does an **Artificial Neural Network** learn?

Weights for Patterns



An Artificial Neural Network

Label the graph:



How are you **smarter than AI**?

I know what upwards motion is 😊