


- if neurons are active
↳ oxygen is used
- eyes closed : alpha rhythm in Cortex 
- Brain waves : classifier only usable for same person, same day
- Brain pong : thinking about right/left hand
- brain spelling : concentrate on letter and measure reaction when its popping up

EEG measuring

you only measure the sum of firing neurons

⇒ we can measure only synchronized firing

We measure **neo cortex** → 80% excitatory, 20% inhibitory
↳ perception & cognition
biggest part

128 electrodes are max that make sense

A lot of different cell types in brain!

↳ Depends on function

Persons die when they don't fire

Synapses are strengthened with input
(learning)

↳ Hebb Rule : what fires together wires together

Ion channels in neurons for input

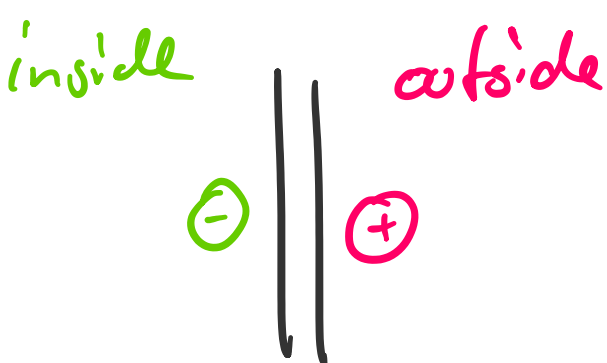
↳ reason why humans need to sleep?

Perception

$$y = f\left(\sum_{i=1}^n w_i x_i - \theta\right)$$

↳ cotain threshold (neuron only fires when threshold is met)

Electrical fields of neurons



one single neuron not measurable

Dipol character of a neuron

⇒ that is actually what you measure