

Machine Learning

Neural Networks: Representation

Neurons and the brain

Neural Networks

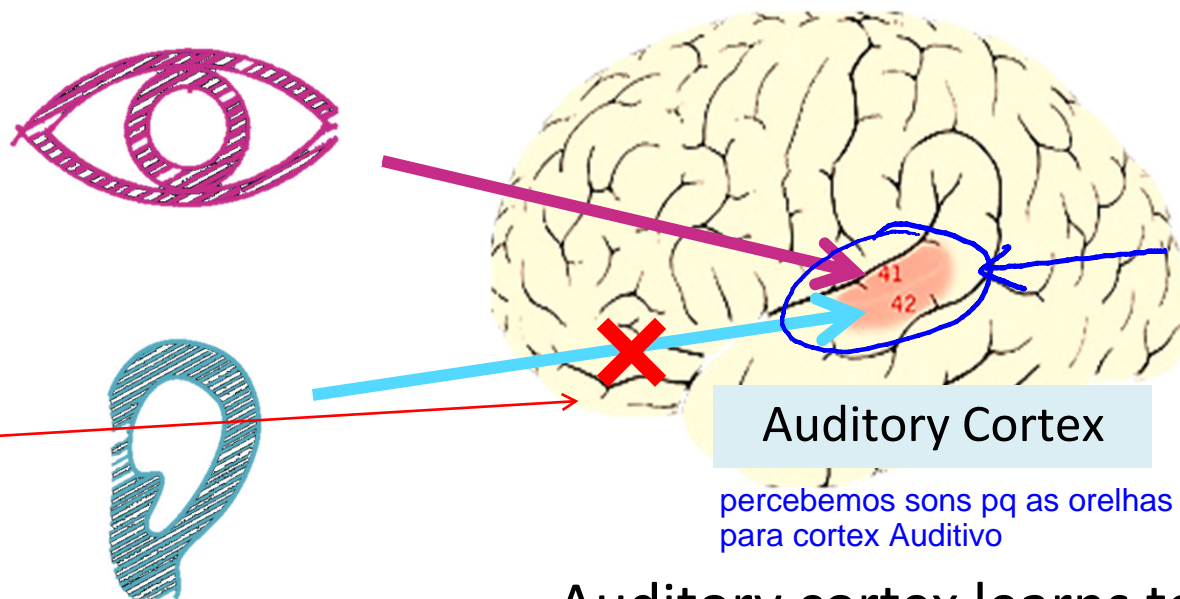
- Origins: Algorithms that try to ^{imitar} mimic the brain.
- Was very widely used in 80s and early 90s; popularity diminished in late 90s.
- Recent resurgence: State-of-the-art technique for many applications

← algoritmo mt caro em termos de memoria;
so recentemente alguns pc's se tornaram rapido o suficiente e
conseguem o correr normalmente

The “one learning algorithm” hypothesis

cientistas
cortaram o fio da
orelha humano
ate cortex e
cozeram esse fio
no cerebro dum
animal

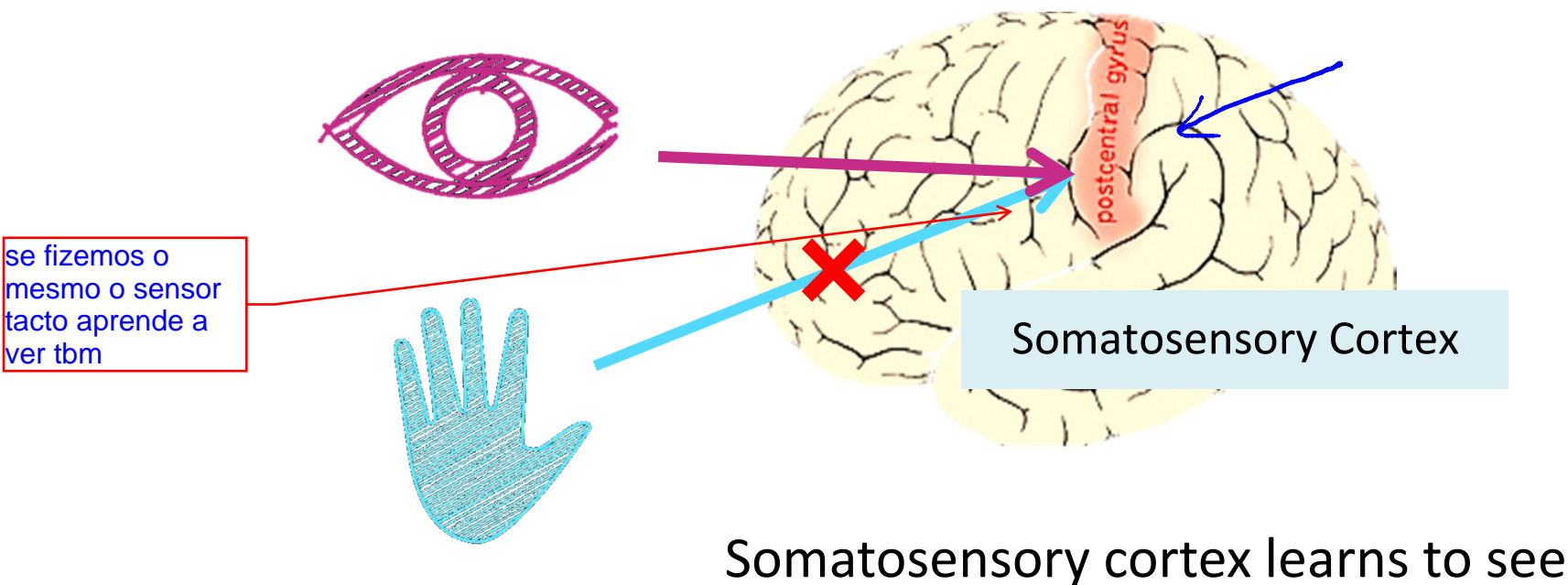
acontece que
cozeram de modo
fio fizesse ligação
com olho e esse
cortex aprendia a
ler!



percebemos sons pq as orelhas encaminham o sinal som
para cortex Auditivo

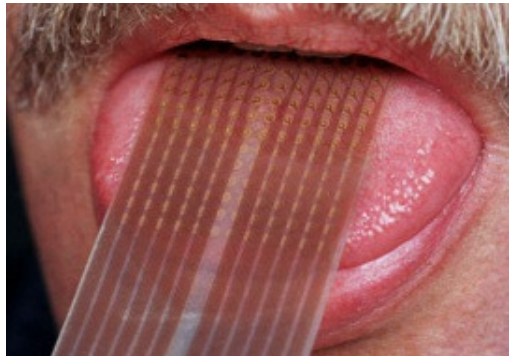
Auditory cortex learns to see

The “one learning algorithm” hypothesis neuro re-writing techniques



aprender a ver com lingua

Sensor representations in the brain

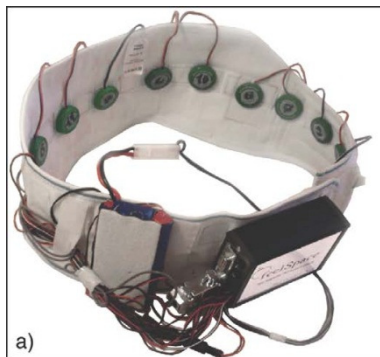


Seeing with your tongue

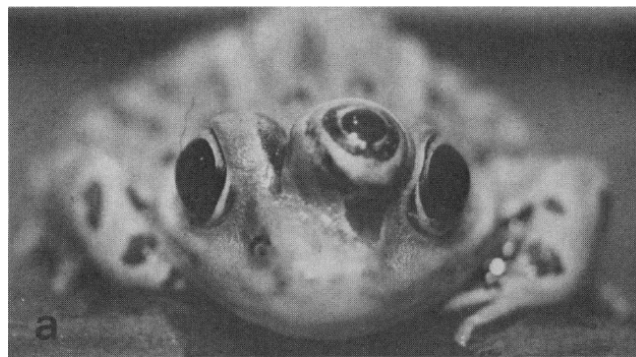
aprender a andar normalmente atravez de energia som



Human echolocation (sonar)



Haptic belt: Direction sense



Implanting a 3rd eye

