

Machine Learning X Inteligência Artificial



Prof. Dr. Diego Renan Bruno

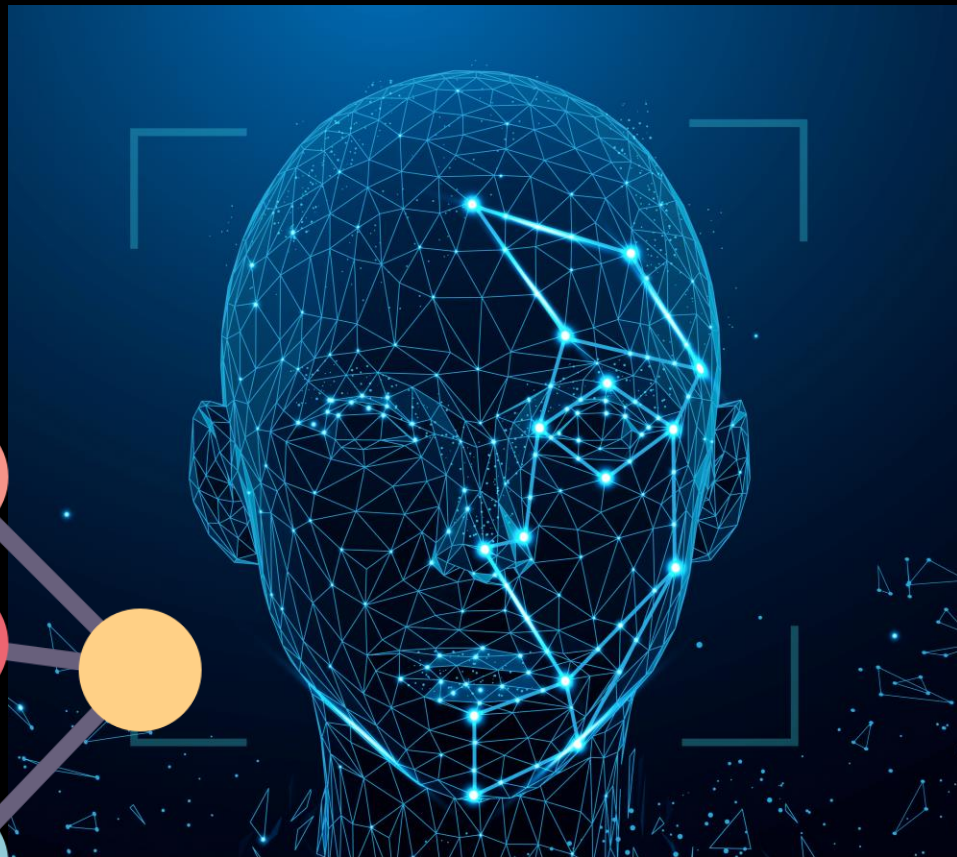
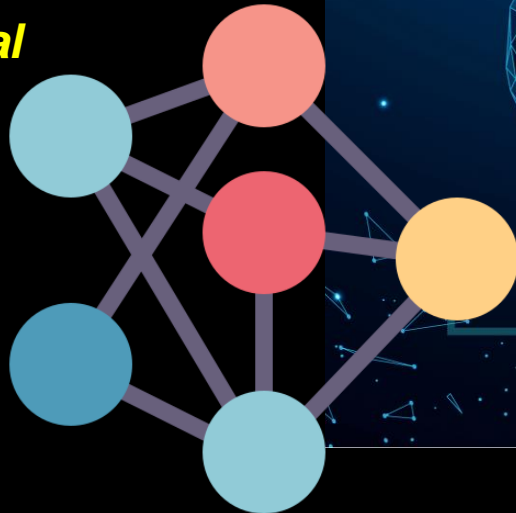
Education Tech Lead na DIO

Doutor em Robótica e *Machine Learning* pelo ICMC-USP

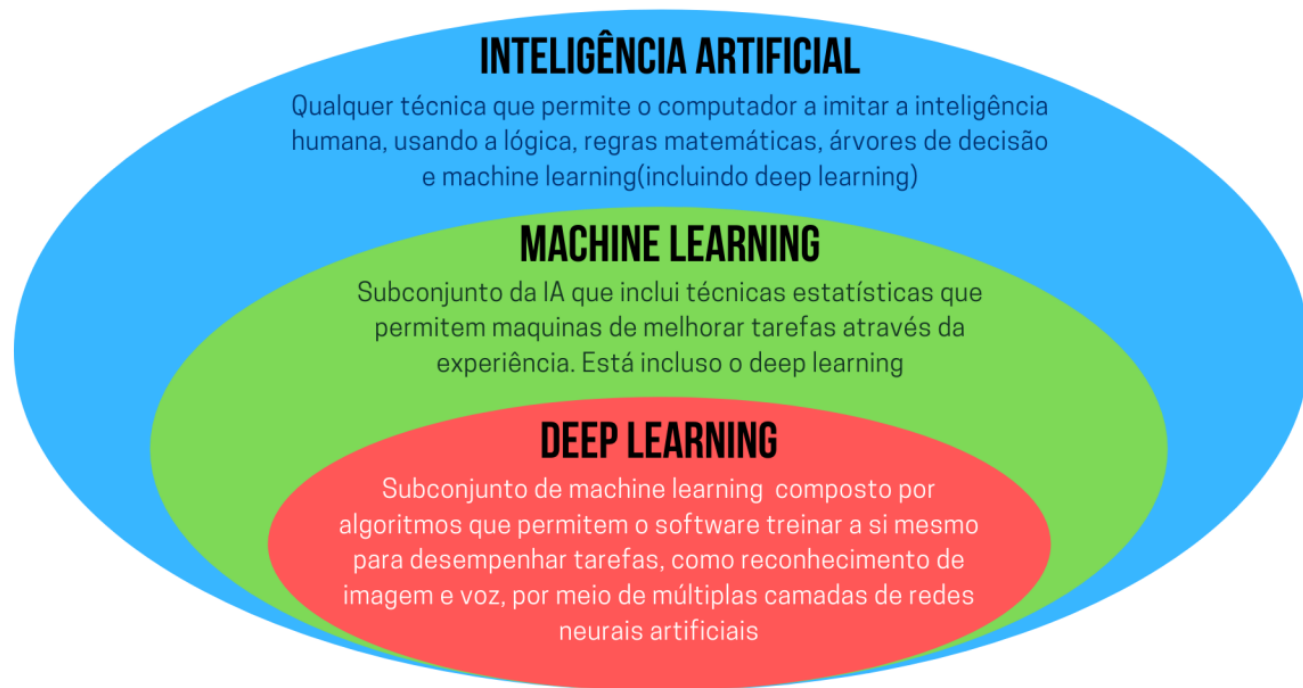
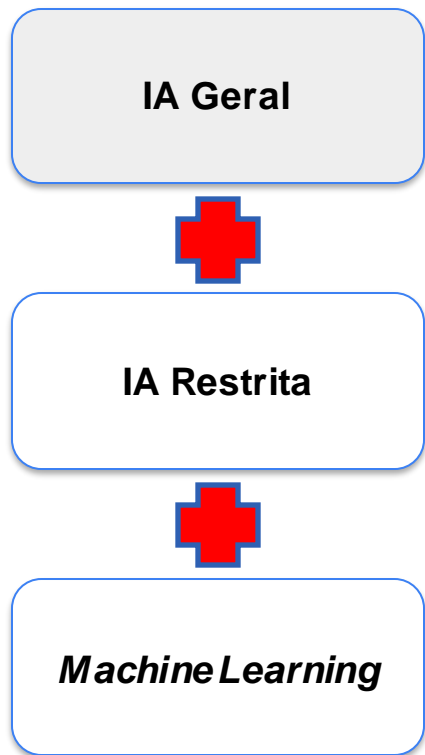


Qual a diferença entre Machine Learning e Inteligência Artificial?

Inteligência Artificial



O mundo da IA...



O mundo da IA...

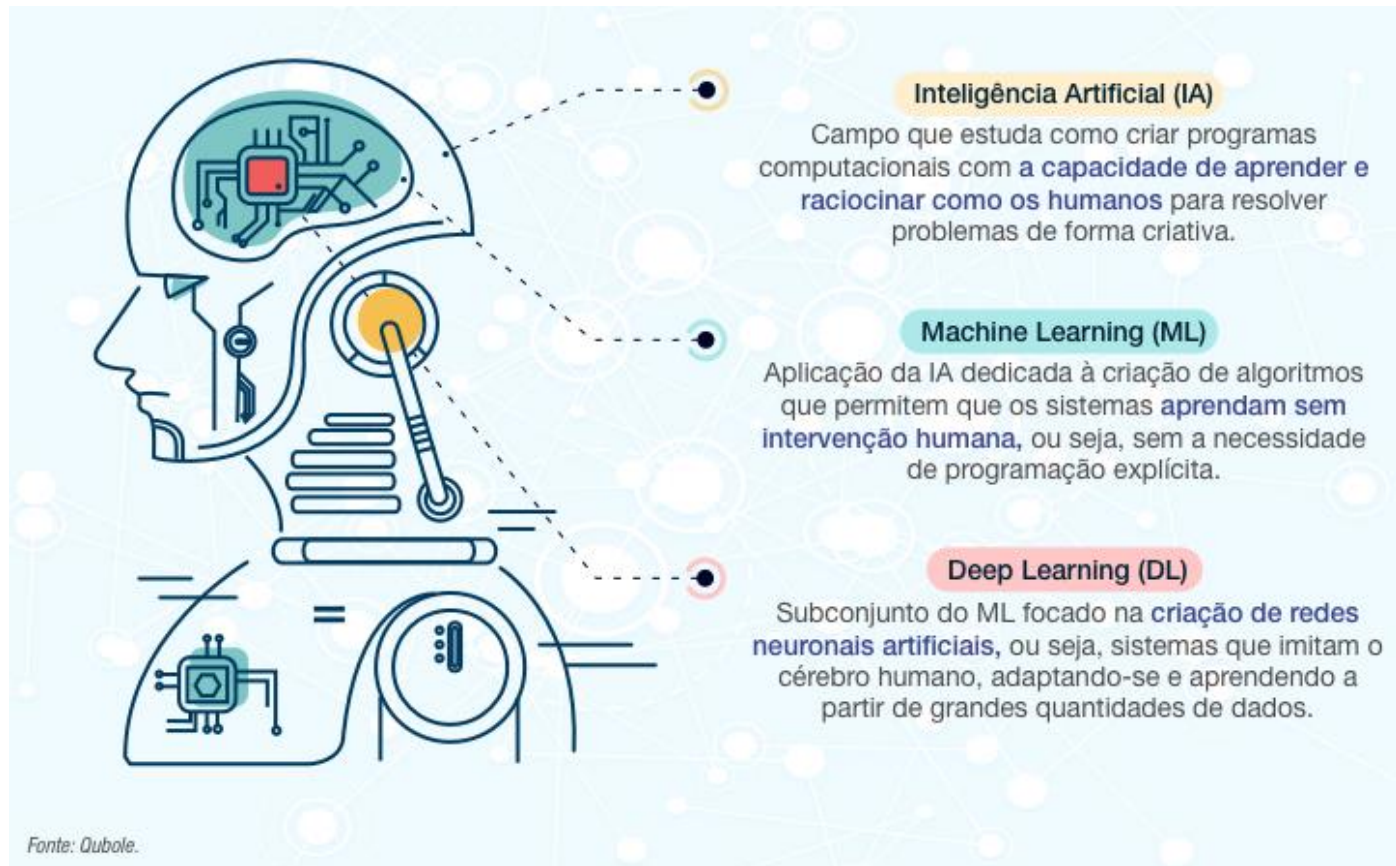
IA Geral



IA Restrita



Machine Learning



O mundo da IA...

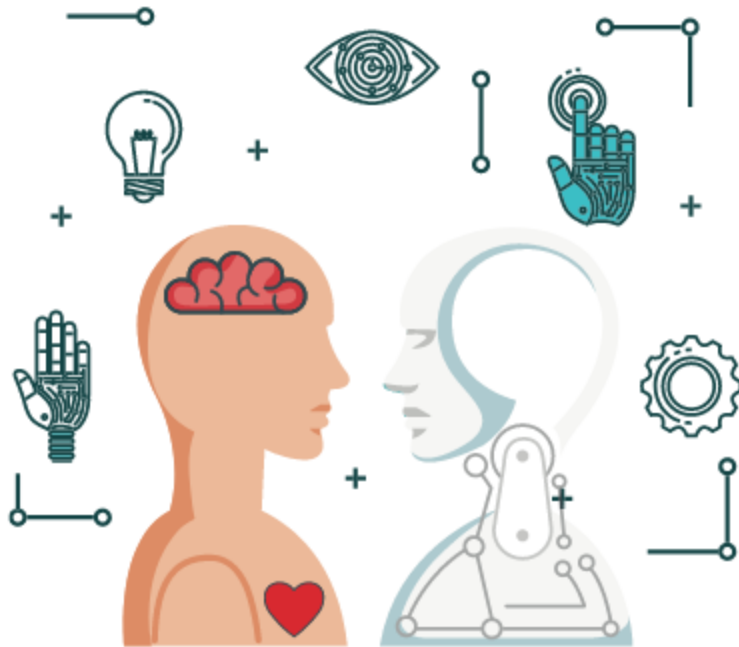
IA Geral



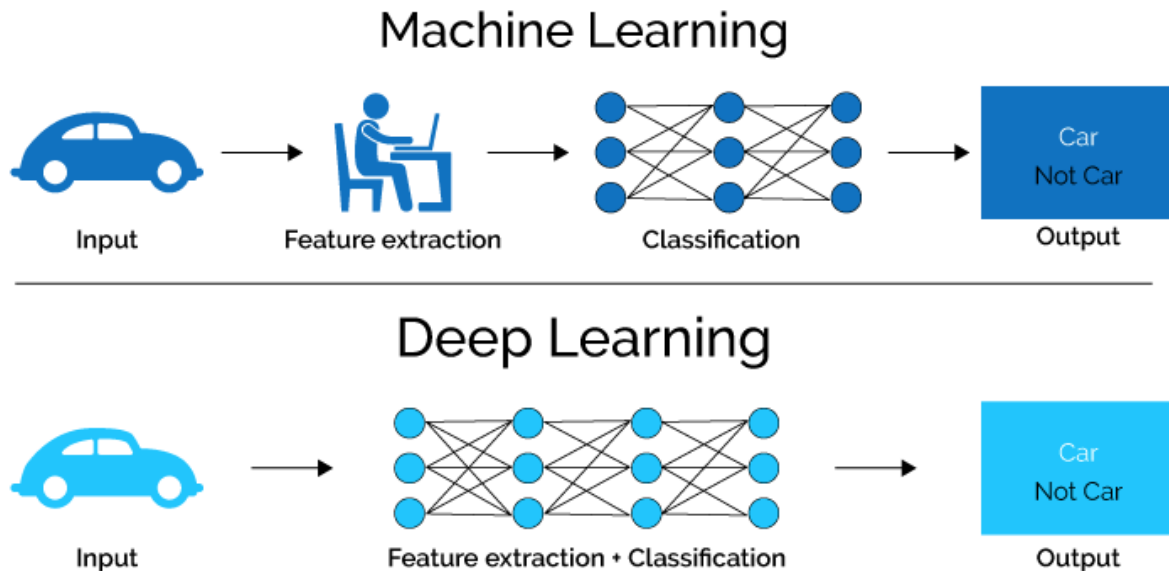
IA Restrita



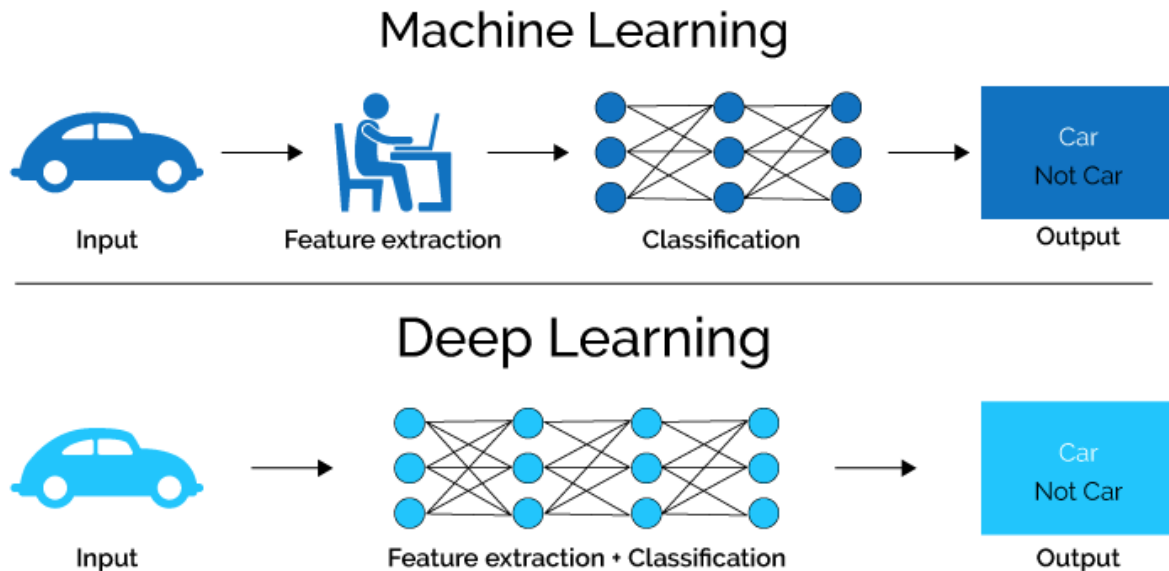
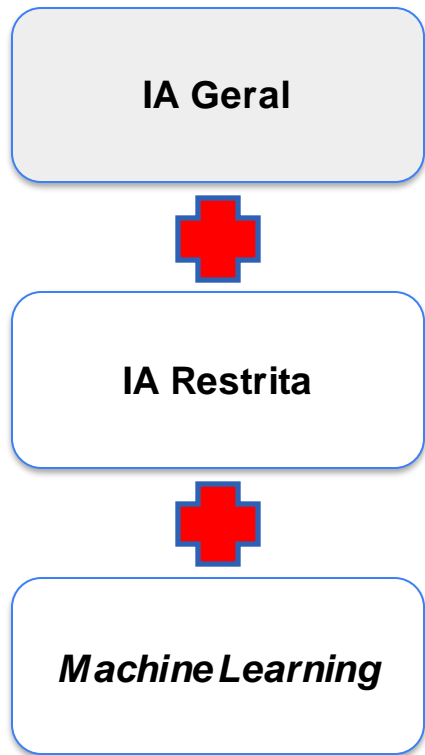
Machine Learning



O mundo da IA...



O mundo da IA...



O mundo da IA...

IA Geral



IA Restrita



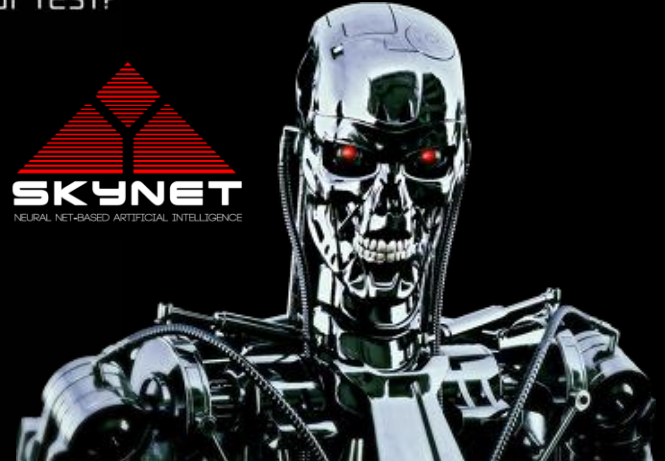
Machine Learning

ex machina

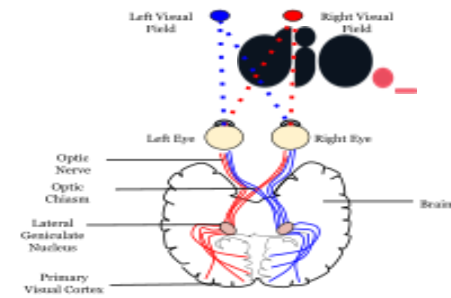
WHAT HAPPENS TO ME IF I FAIL YOUR TEST?



ARTIFICIAL INTELLIGENCE



Deep Learning - TensorFlow



Extração de *features* 2D:

- **CNN:** Aprendem automaticamente a extrair *features* em imagens 2D

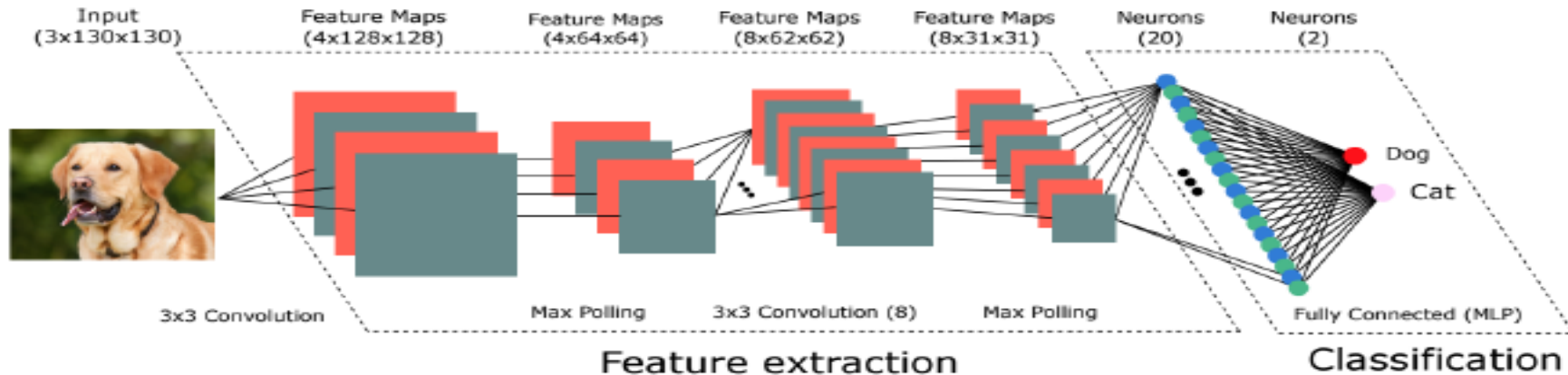
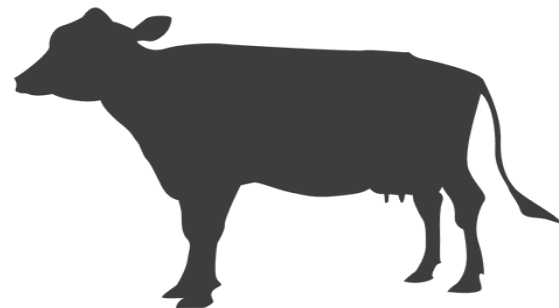


Figura 2: DCNN – [TensorFlow]

Problemas de IA

Reconhecer o tipo da carne

Grandes valores



Problemas de IA

Algo parecido já é feito...



BIG data

Análise de grandes volumes de dados...



Lavoura



Bancos

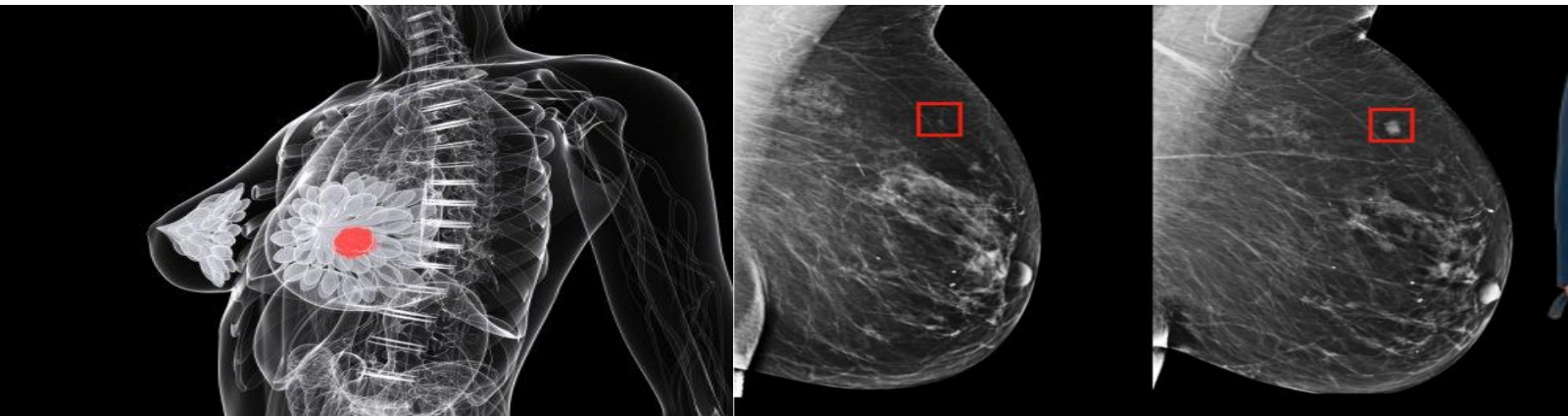
Sistemas de Recomendação

Como vender produtos relacionados...



Suporte para a Medicina

Dar suporte para um médico...



20 SEGREDOS

QUE OS MÉDICOS NÃO CONTAM

Cirurgias desnecessárias, remédios que não funcionam, conflitos de interesse: a medicina está doente. Para superar essa crise, é preciso enfrentar algumas verdades inconvenientes.

BIZARRO

Alguém gostaria de vida eterna?

2045
STRATEGIC SOCIAL INITIATIVE

AVATAR PROJECT MILESTONES



Avatar **D** 2040 - 2045

Um avatar semelhante a um holograma

Avatar **C** 2030 - 2035

Um avatar com um cérebro artificial no qual uma personalidade humana é transferida no final da vida

Avatar **B** 2020 - 2025

Um avatar em que um cérebro humano é transplantado no final da vida

Avatar **A** 2015 - 2020

uma cópia robótica de um corpo humano controlada remotamente via BCI

BIZARRO

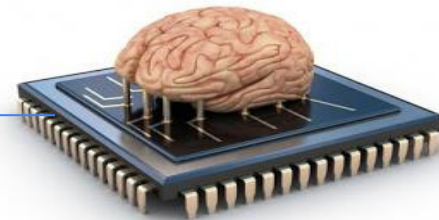
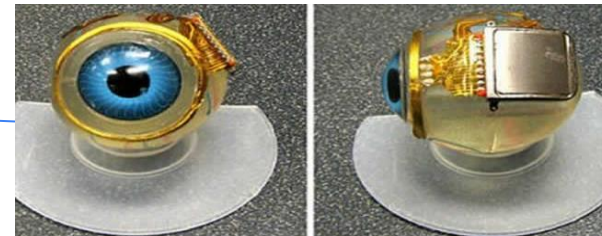
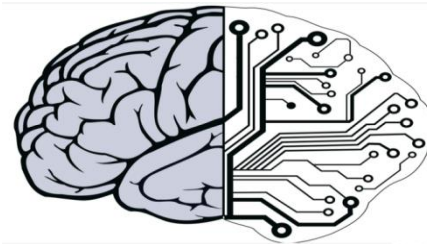


EVOLUTION
2045

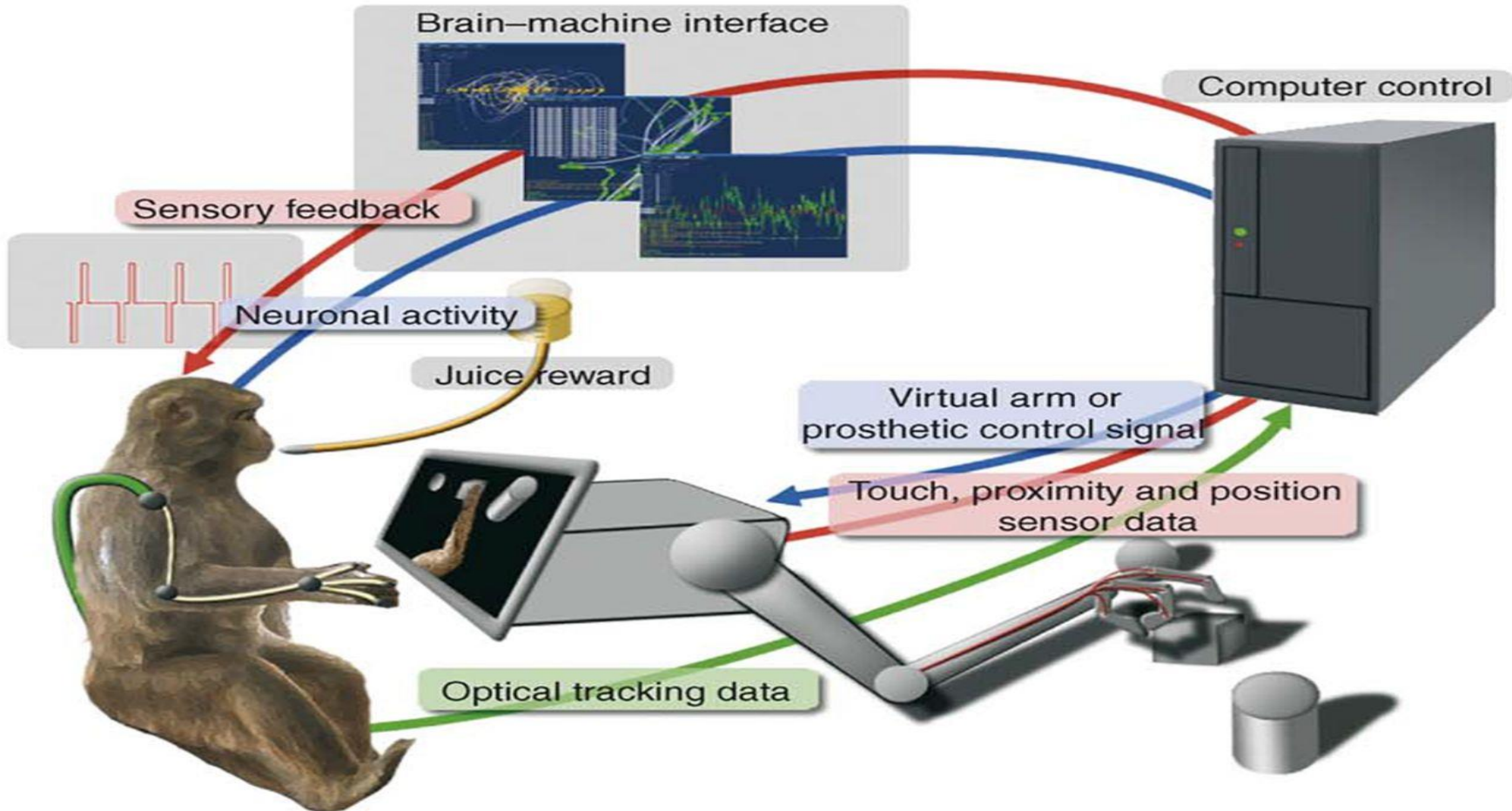
POLITICAL
PARTY

Transhumanismo

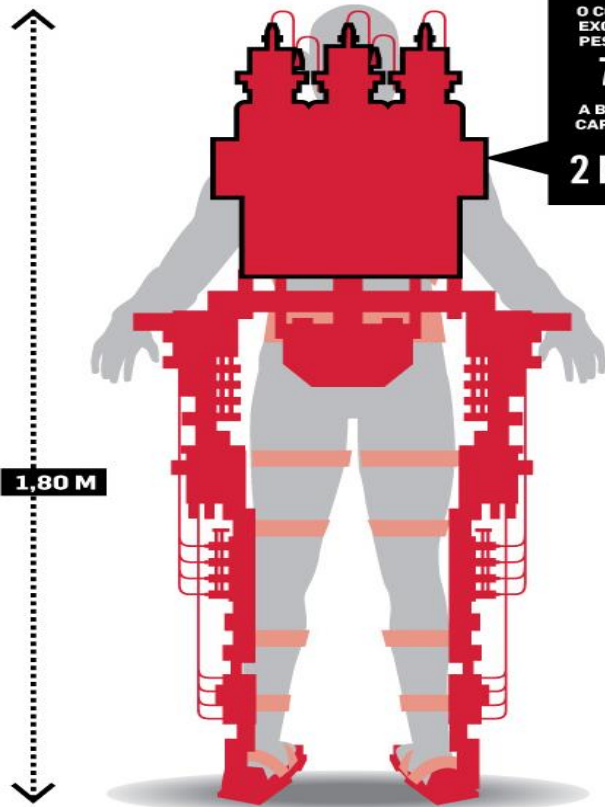
Melhoramento cerebral e corporal



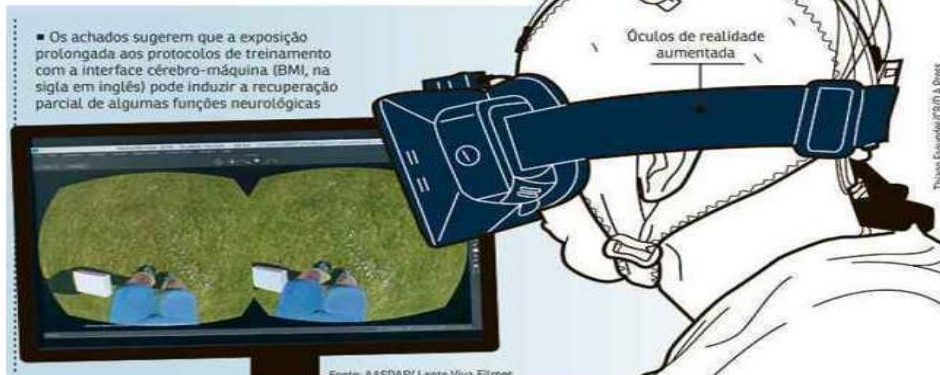
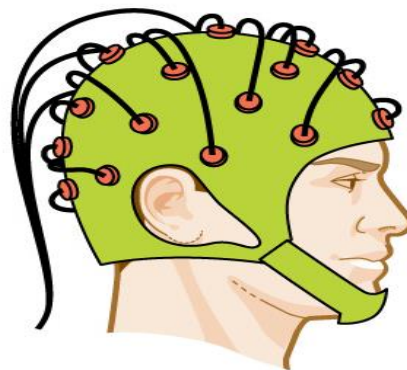
Máquina que pensam como humanos



Máquina que pensam...

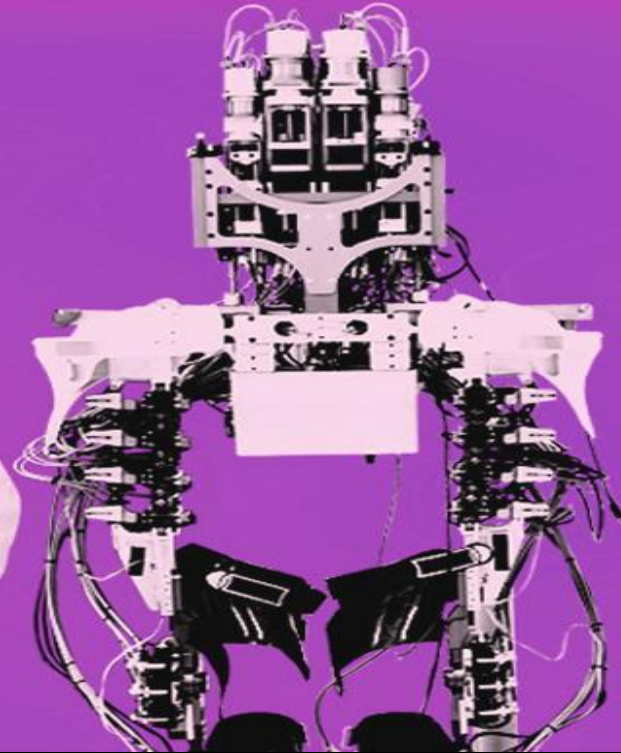
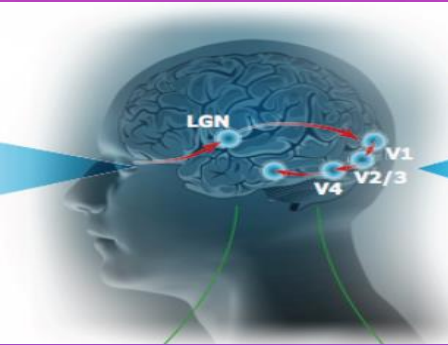


O CONJUNTO DO
EXOESQUELETO
PESA CERCA DE
70 KG
A BATERIA TEM
CAPACIDADE DE
2 HORAS



Máquinas que pensam...

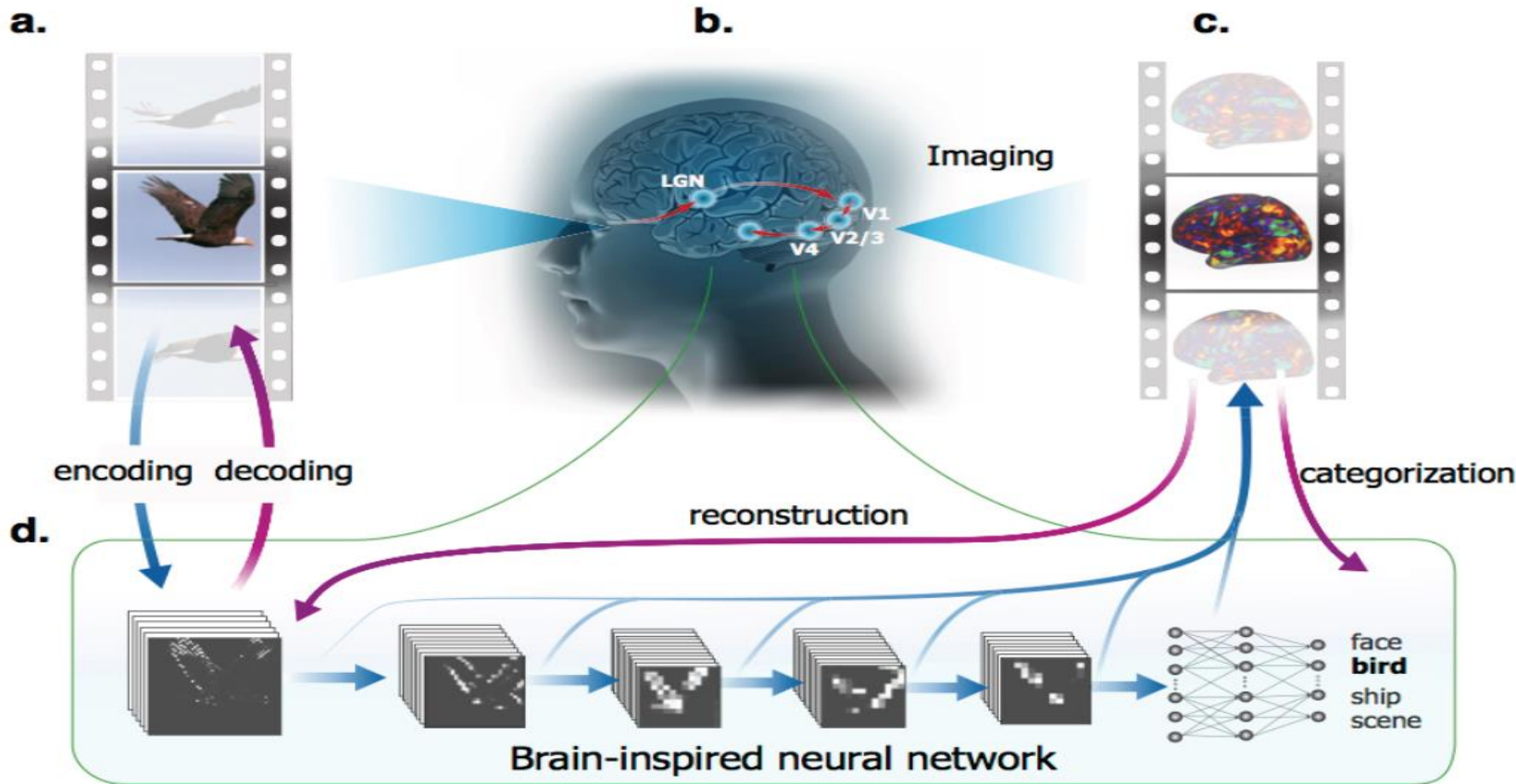
Neurocientista brasileiro Miguel Nicolelis



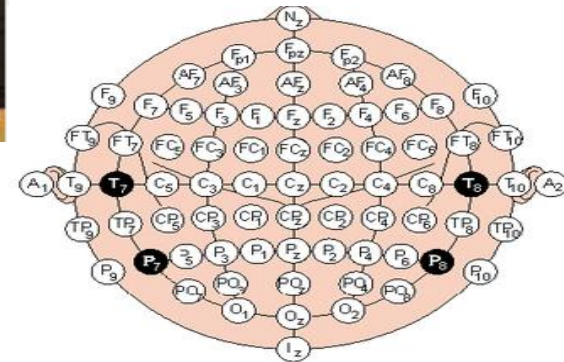
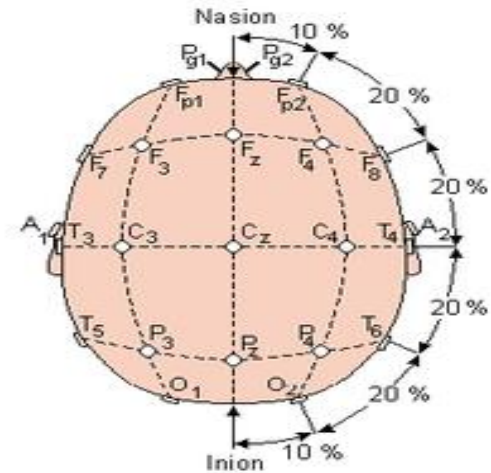
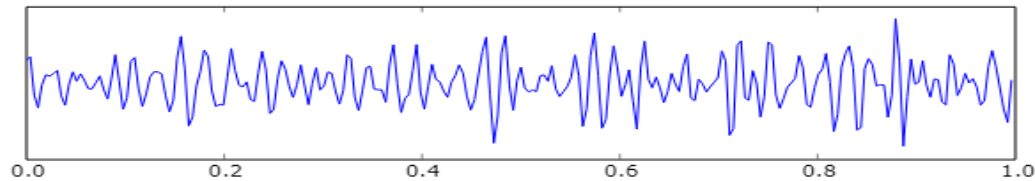
Máquinas que pensam como seres humanos



Aplicações de reabilitação humana – sistemas cognitivos



Máquinas que pensam...



Obrigado!

Inteligência Artificial

Prof. Dr. Diego Bruno

