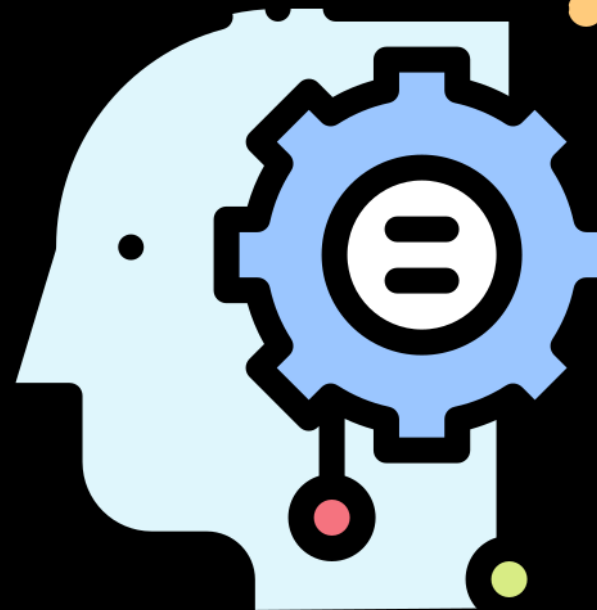


# Machine Learning X Inteligência Artificial



**Prof. Dr. Diego Renan Bruno**

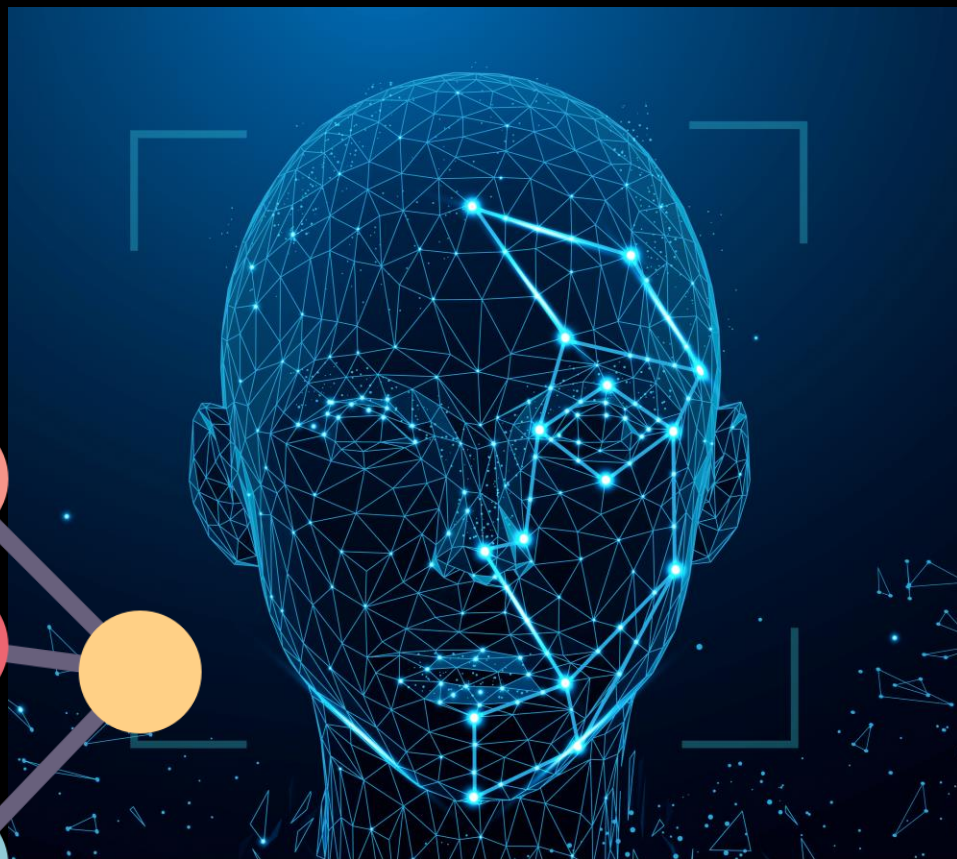
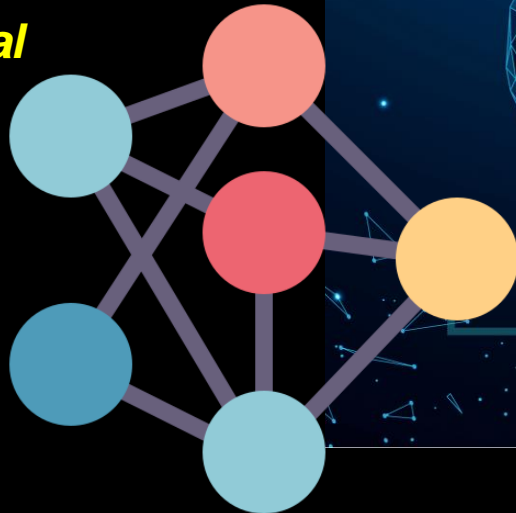
Education Tech Lead na DIO

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

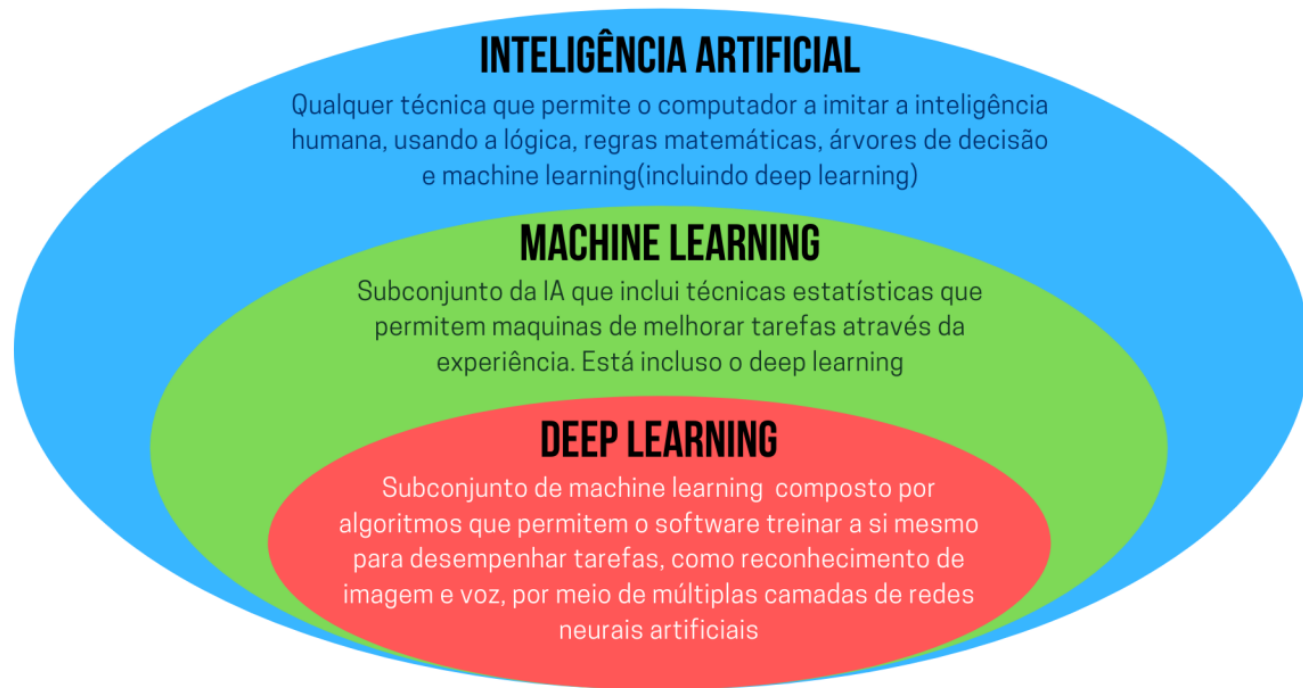
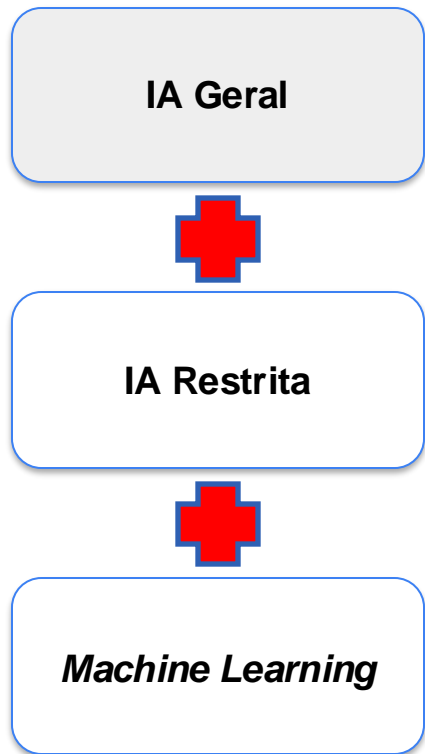


# Qual a diferença entre Machine Learning e Inteligência Artificial?

*Inteligência Artificial*



# O mundo da IA...



# O mundo da IA...

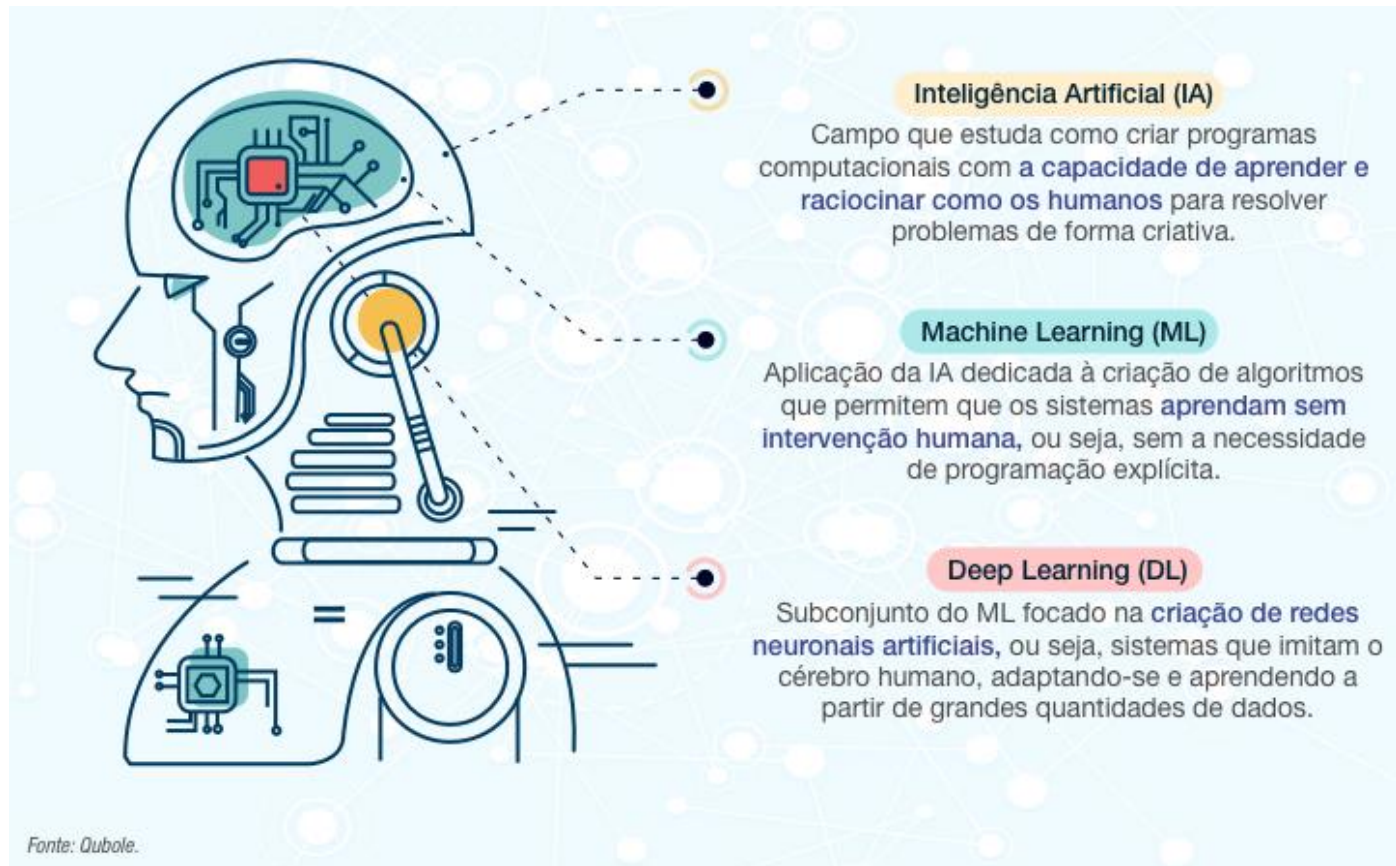
IA Geral



IA Restrita



*Machine Learning*



# O mundo da IA...

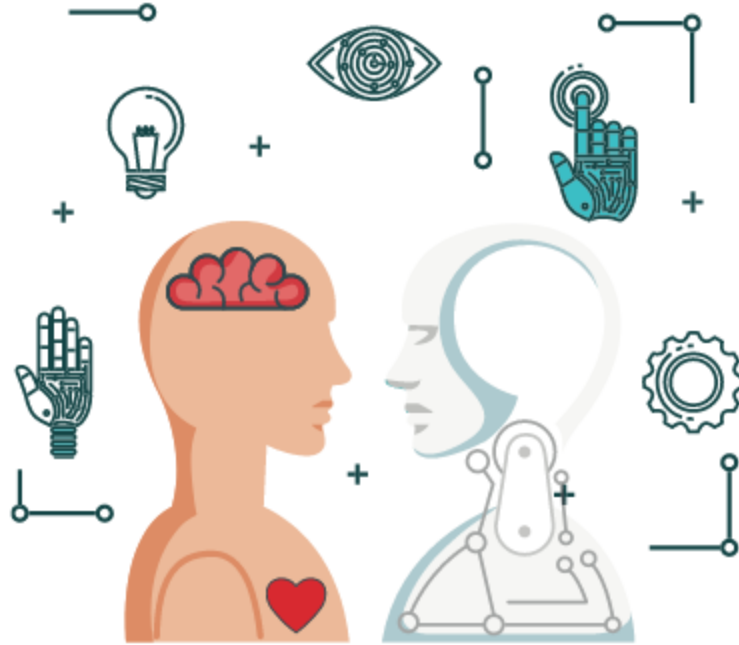
IA Geral



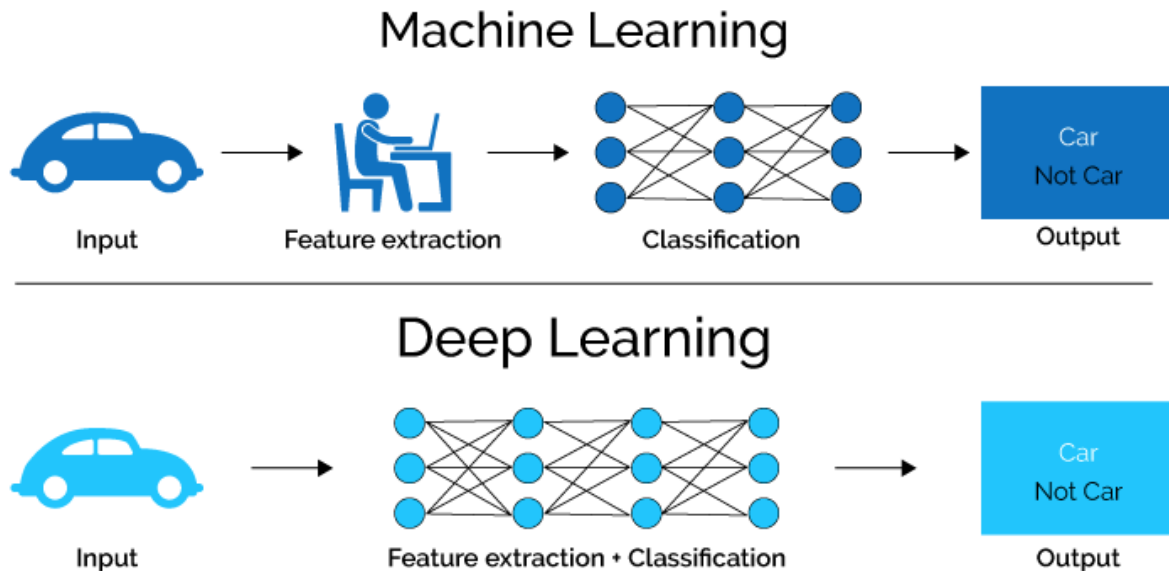
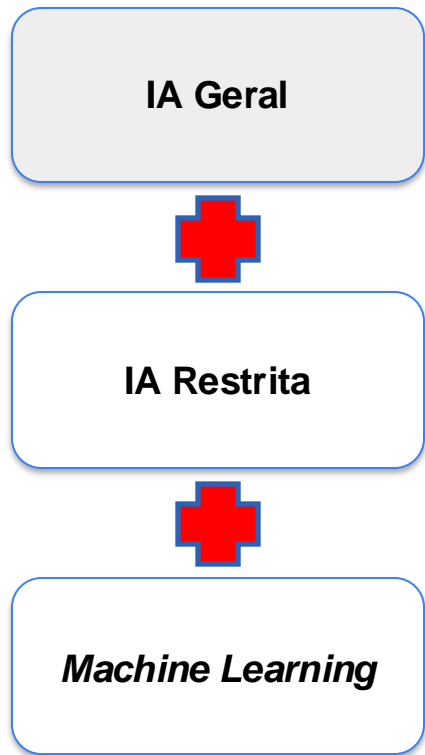
IA Restrita



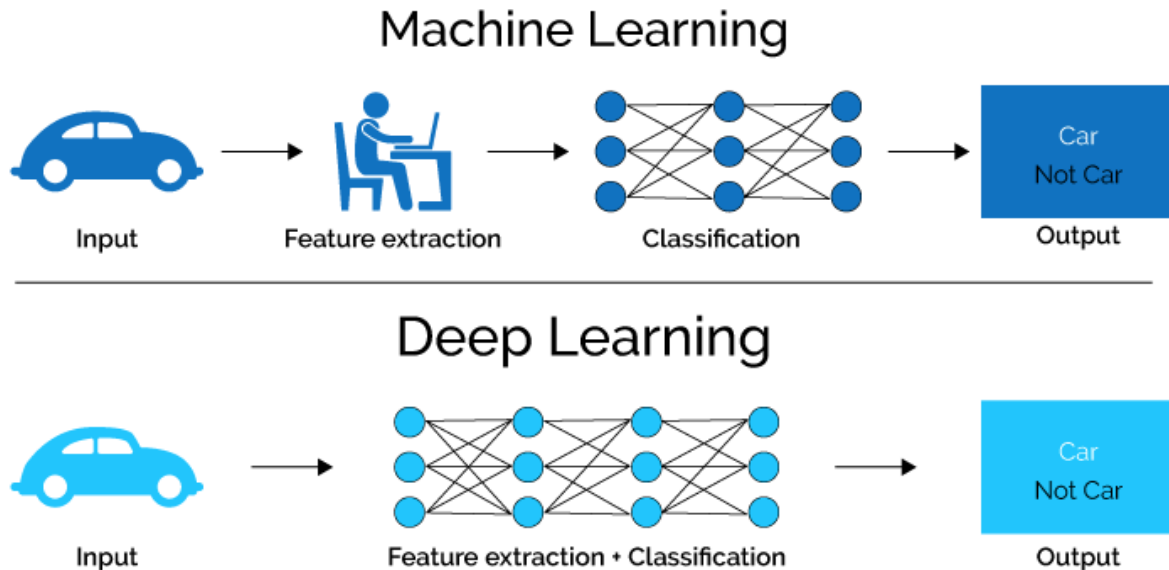
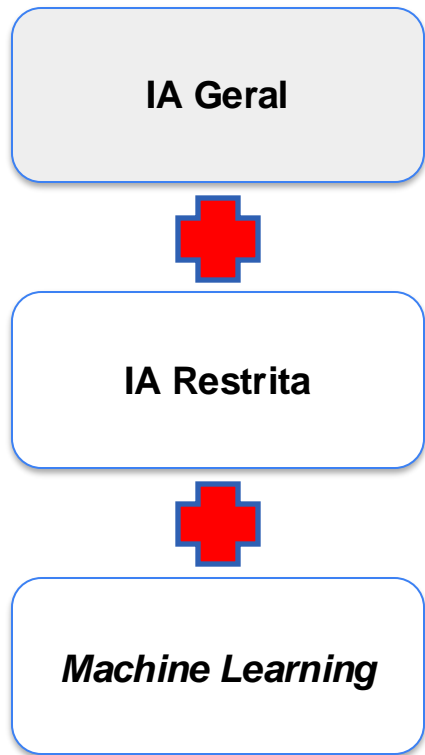
*Machine Learning*



# O mundo da IA...



# O mundo da IA...



# O mundo da IA...

IA Geral



IA Restrita



*Machine Learning*

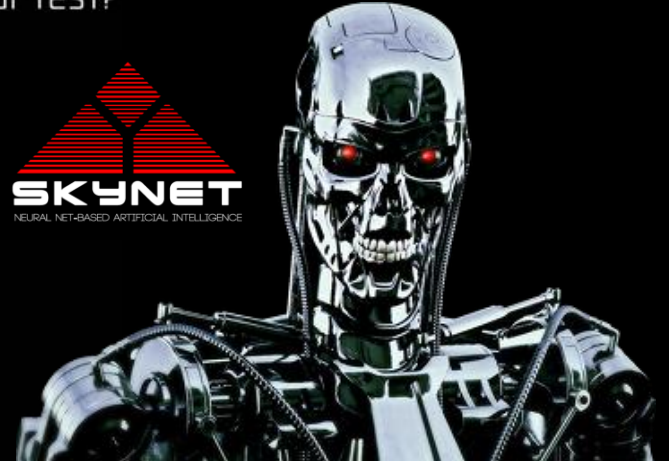
ex machina

WHAT HAPPENS TO ME IF I FAIL YOUR TEST?



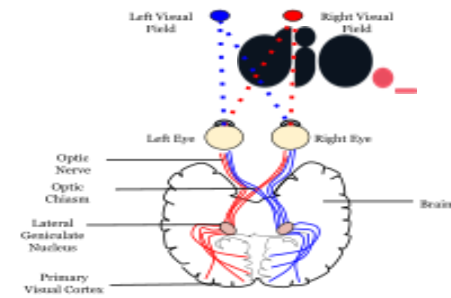
ARTIFICIAL INTELLIGENCE

  
**SKYNET**  
NEURAL NET-BASED ARTIFICIAL INTELLIGENCE





# Deep Learning - TensorFlow



Extração de *features* 2D:

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

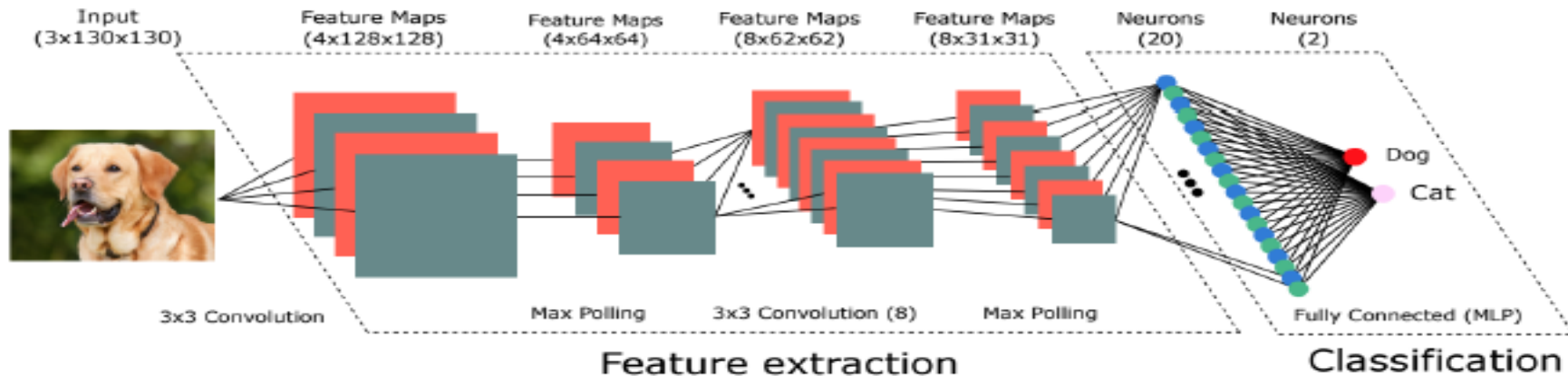
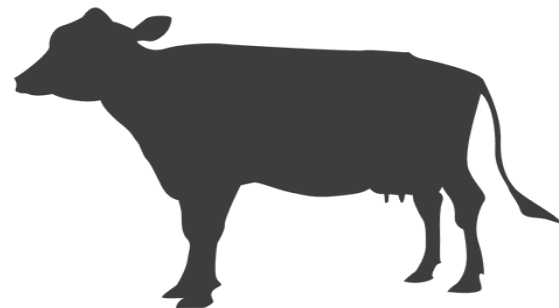


Figura 2: DCNN – [TensorFlow]

# 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

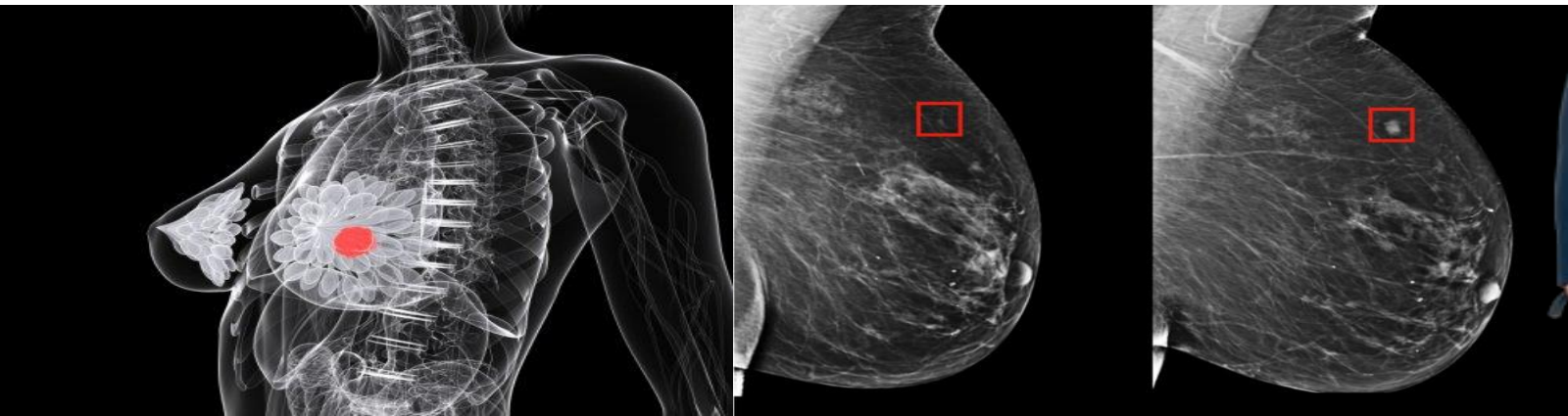
Como vender produtos relacionados...





# Suporte para a Medicina

Dar suporte para um médico...



**BIZARRO**

# 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.*

# 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**

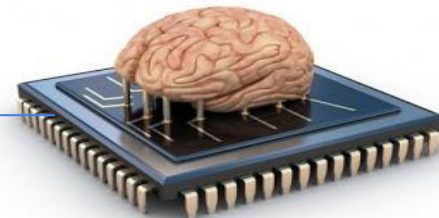
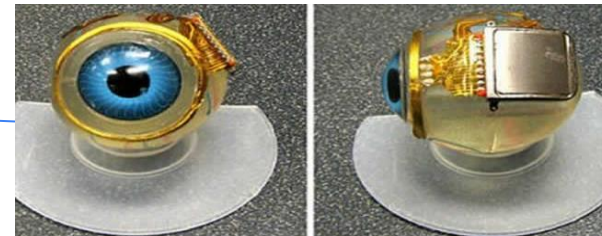
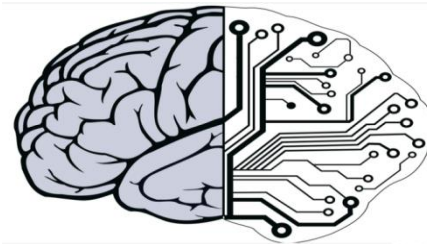


EVOLUTION  
2045

POLITICAL  
PARTY

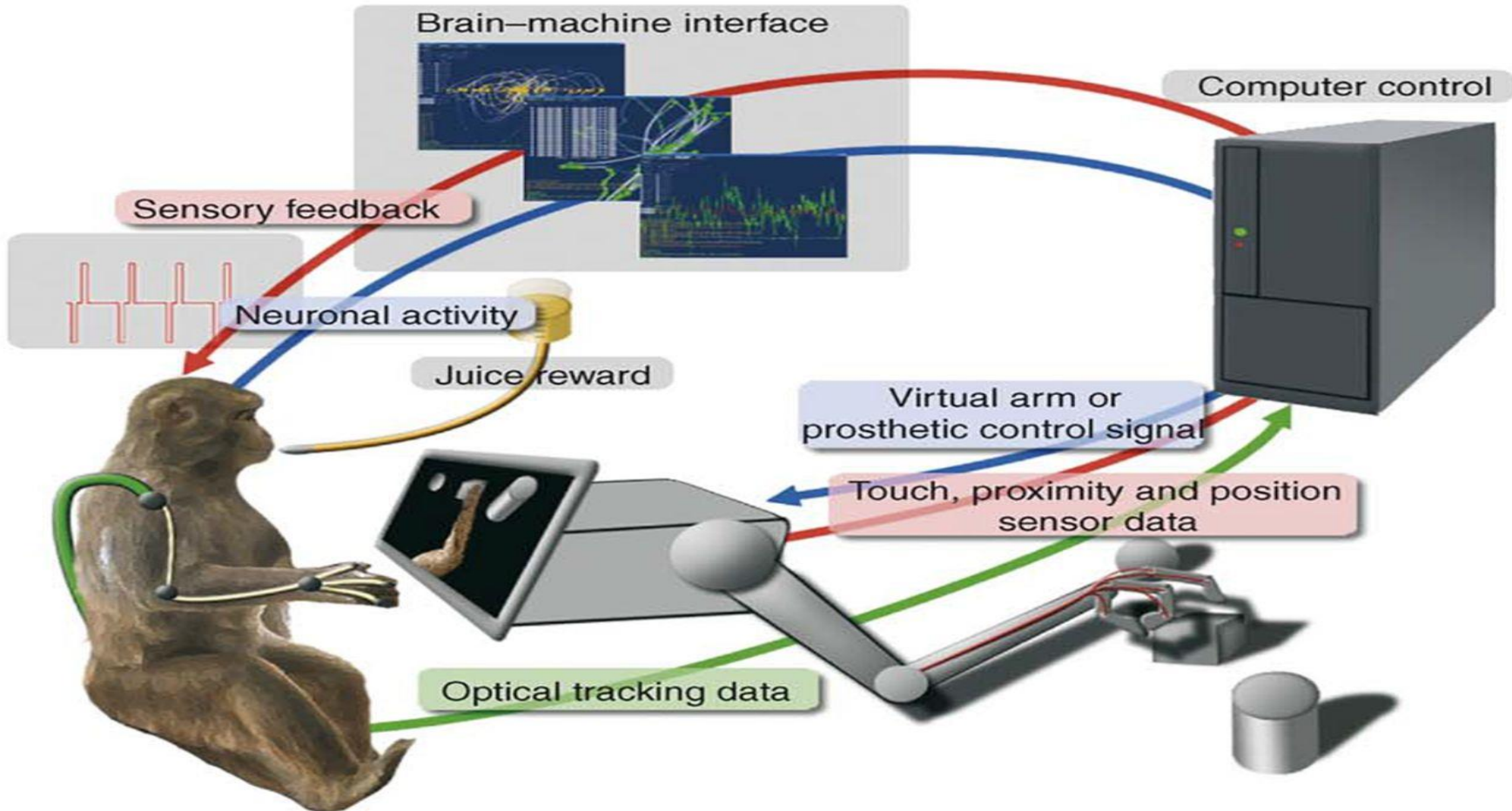
# Transhumanismo

Melhoramento cerebral e corporal

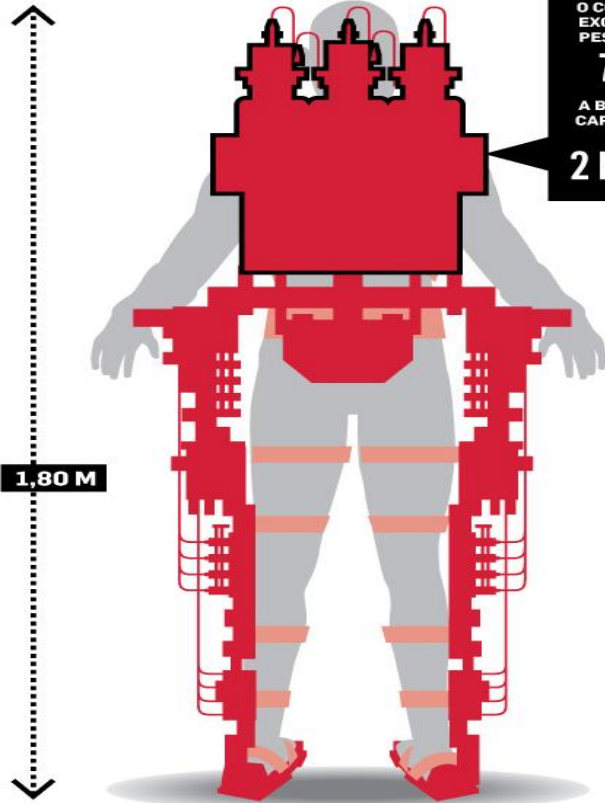




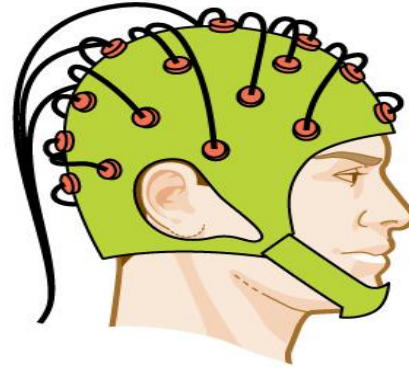
# Máquina que pensam como humanos



# Máquina que pensam...

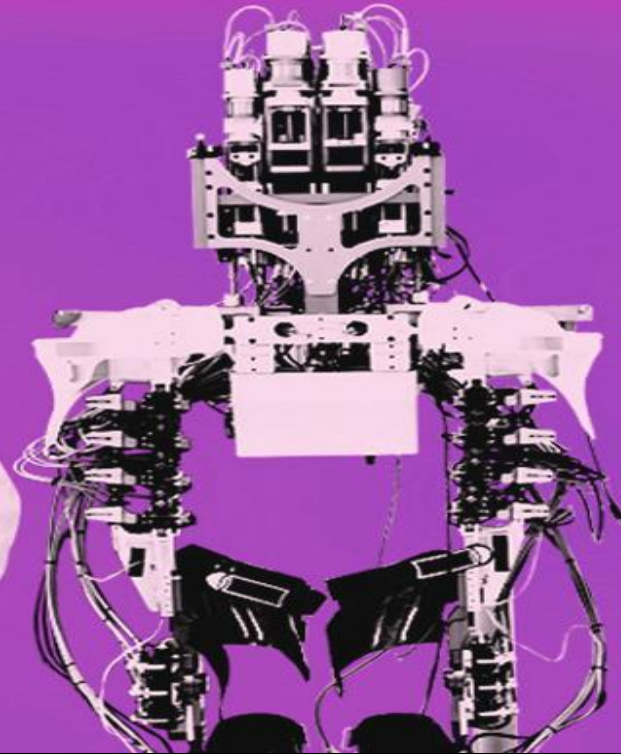
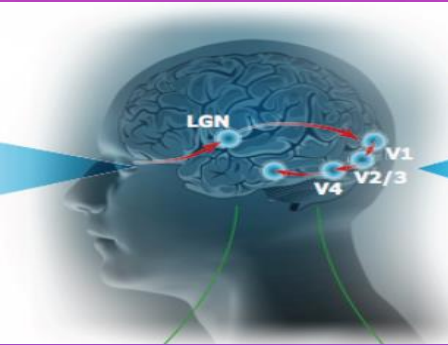


O CONJUNTO DO  
EXOESQUELETO  
PESA CERCA DE  
**70 KG**  
A BATERIA TEM  
CAPACIDADE DE  
**2 HORAS**



# Máquinas que pensam...

Neurocientista brasileiro Miguel Nicolelis

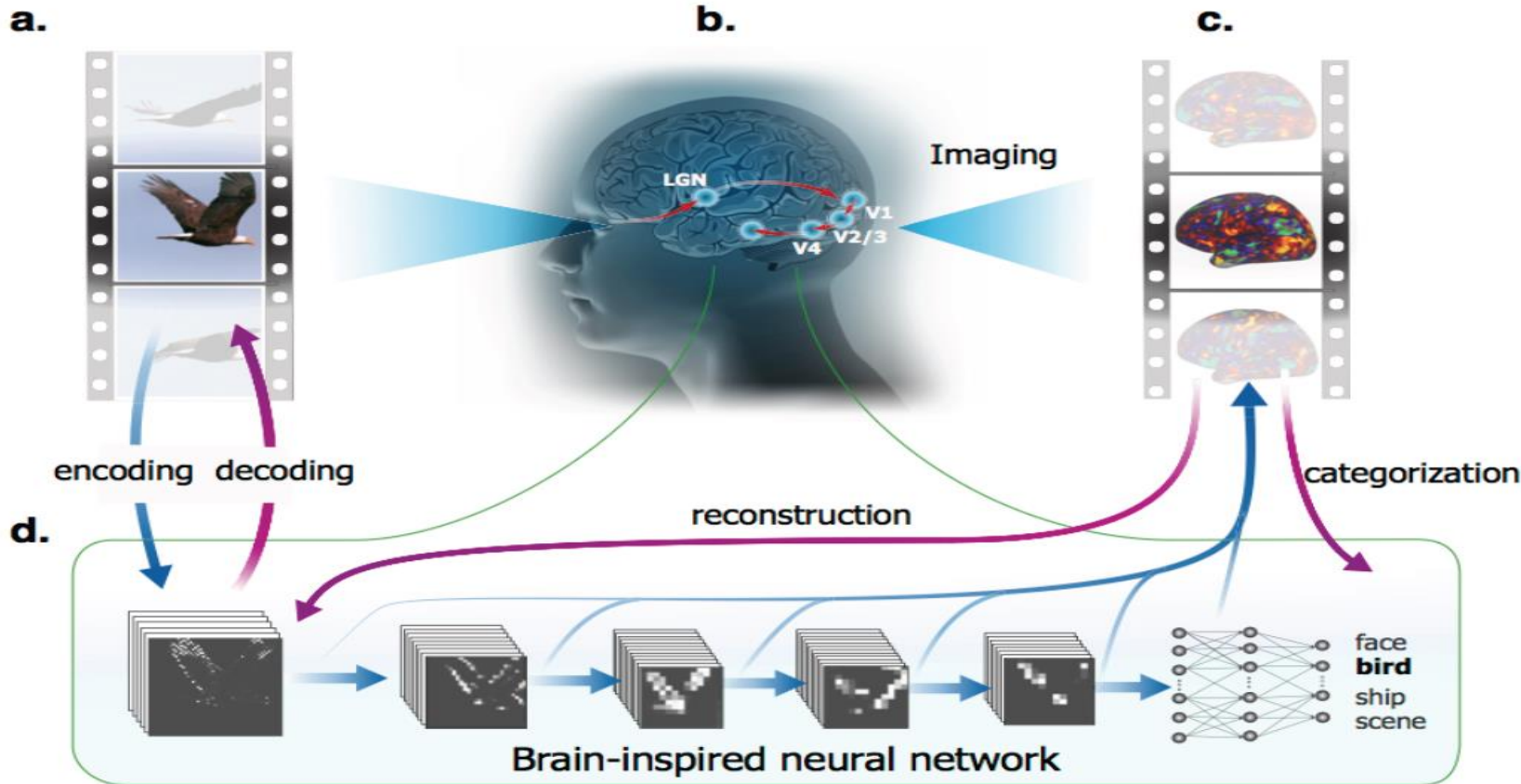




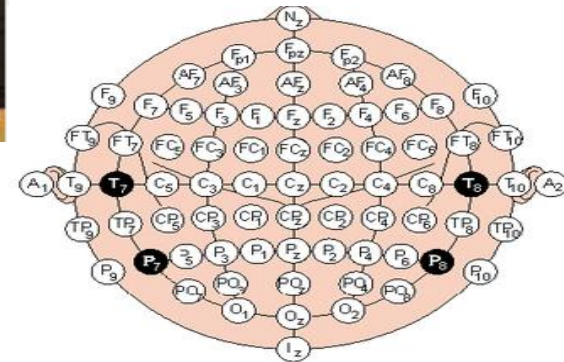
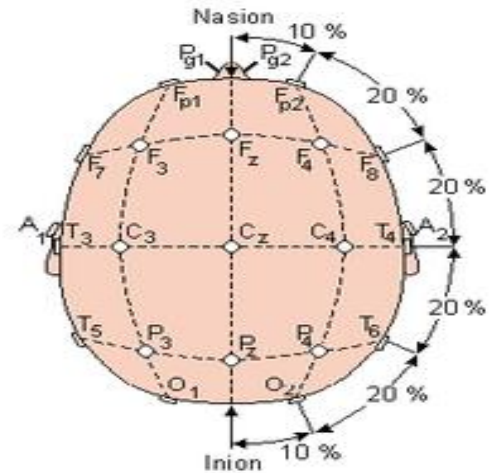
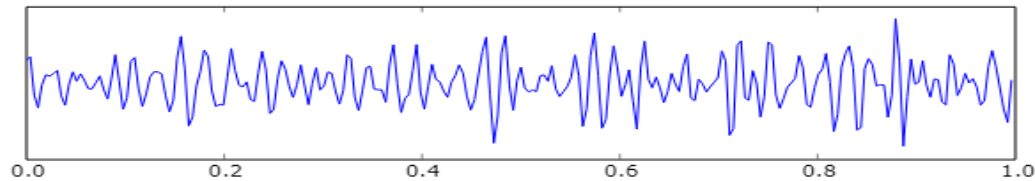
# Máquinas que pensam como seres humanos



Aplicações de reabilitação humana – sistemas cognitivos



# Máquinas que pensam...



# Obrigado!

*Inteligência Artificial*

Prof. Dr. Diego Bruno

