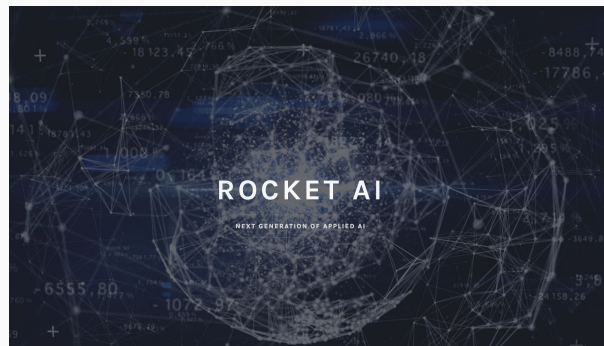
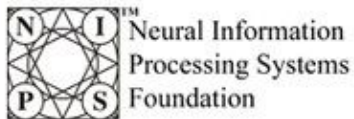


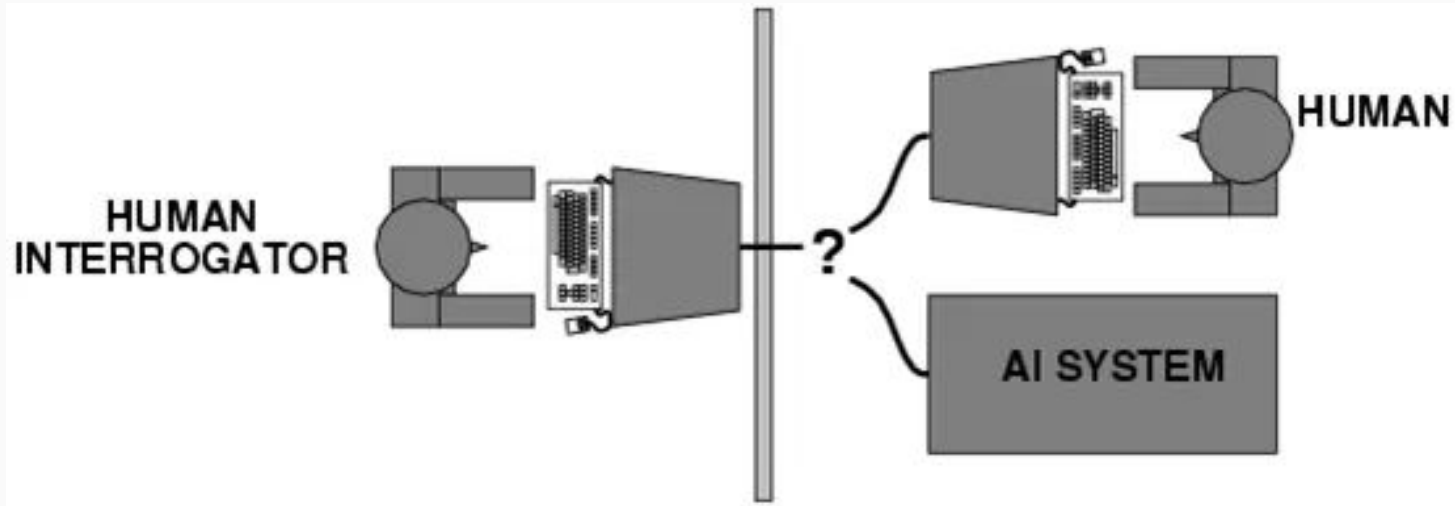
Data & AI

Let's begin with a story



**Temporally
Recurrent
Optimal
Learning**

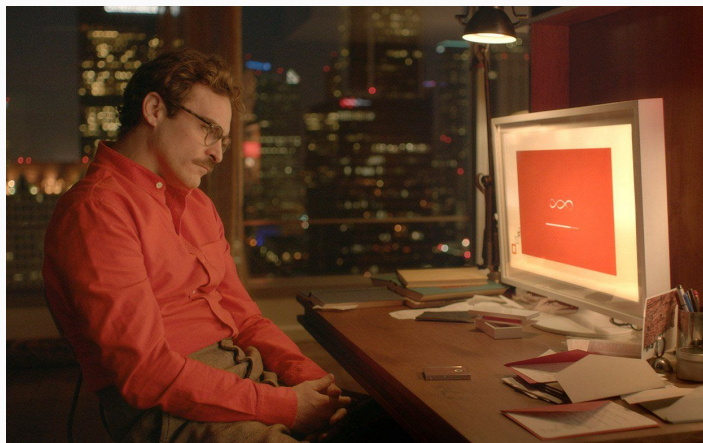
Artificial Intelligence and Machine Learning



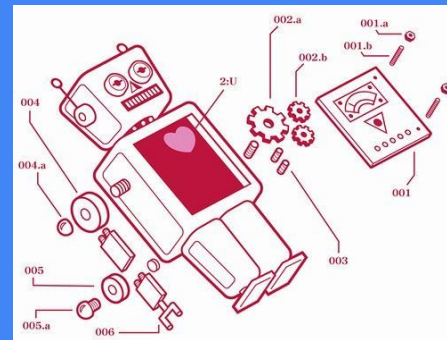
Weak or Narrow AI

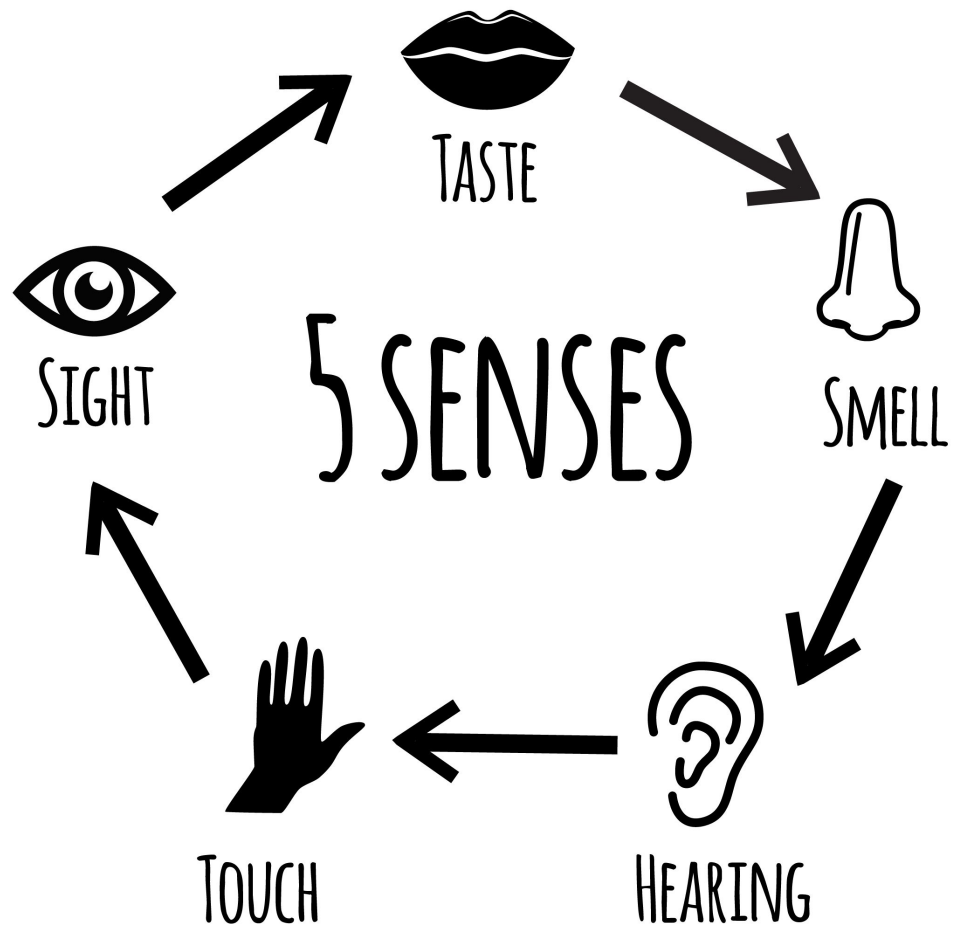


Strong or General AI



The Anatomy of AI



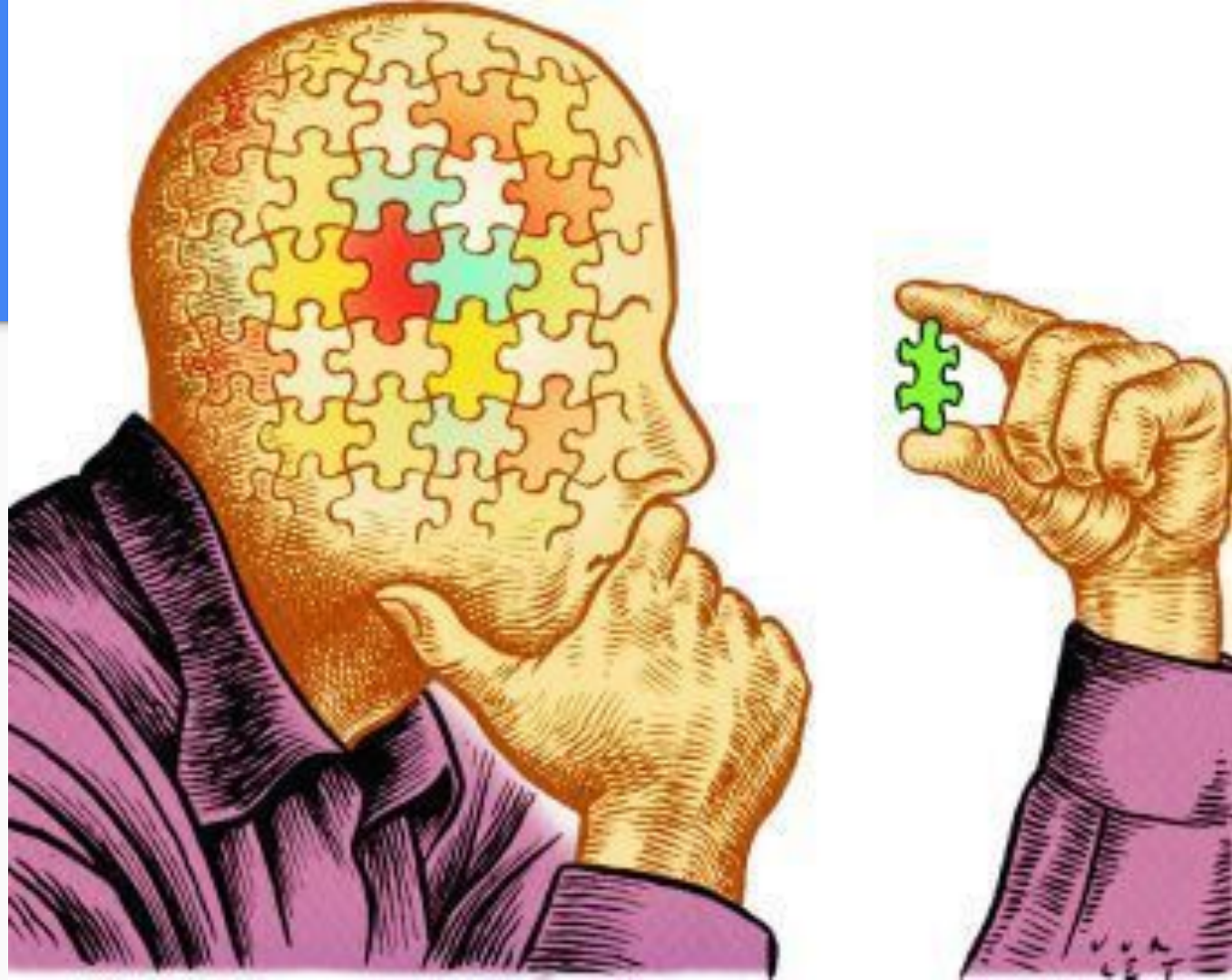


I feel like eating Japanese
in a traditional restaurant
at 7 p.m. in any city



FIND A RESTAURANT







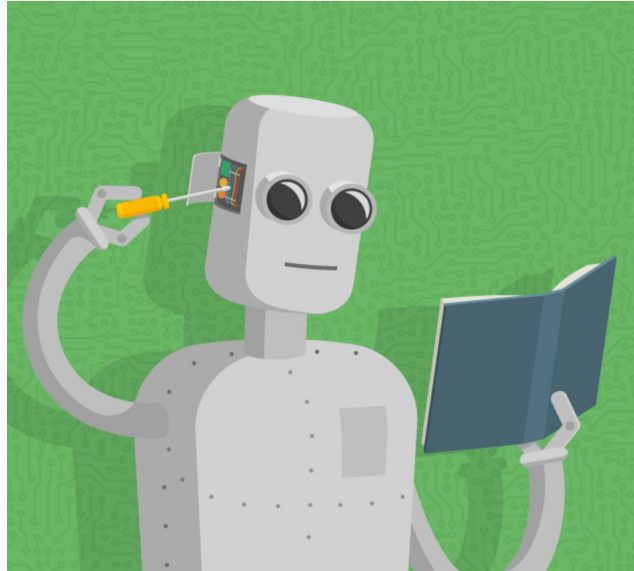
Data Analysis



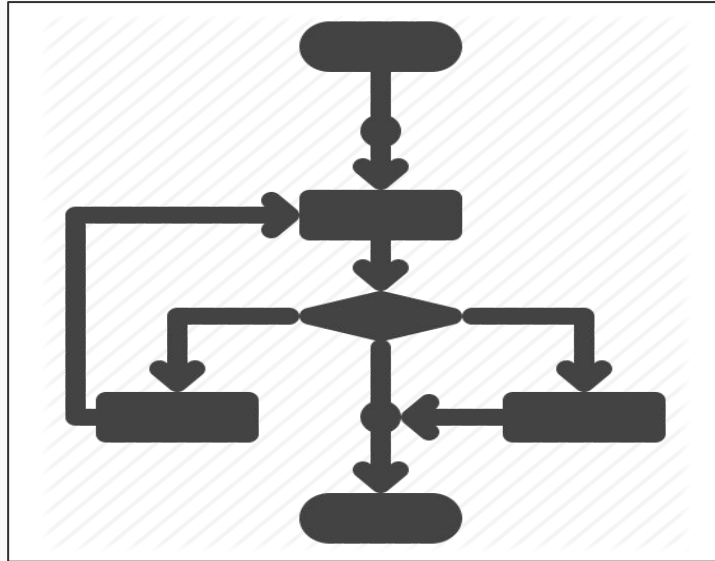
Data Science



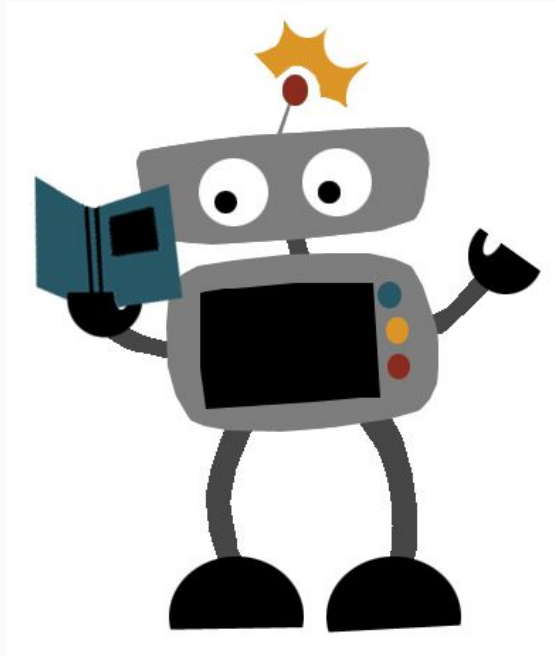
Machine Learning



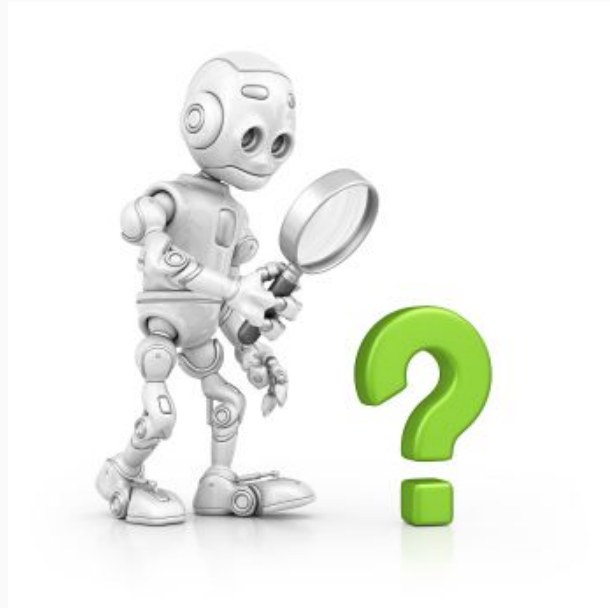
Algorithms



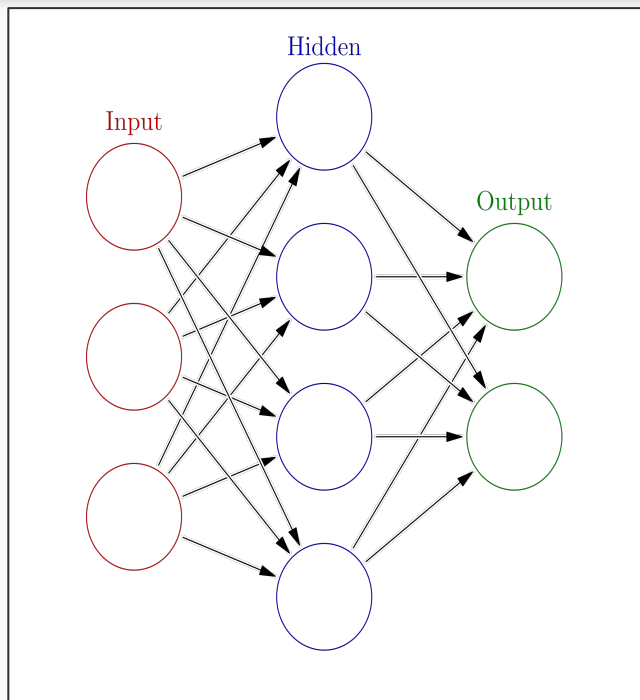
Supervised Learning



Unsupervised Learning



Neural Networks



INPUT		OUTPUT
A	B	A AND B
0	0	0
0	1	0
1	0	0
1	1	1

$$\Theta^{(1)} = \begin{bmatrix} -30 & 20 & 20 \end{bmatrix}$$

$$h_{\Theta}(x) = g(-30 + 20x_1 + 20x_2)$$

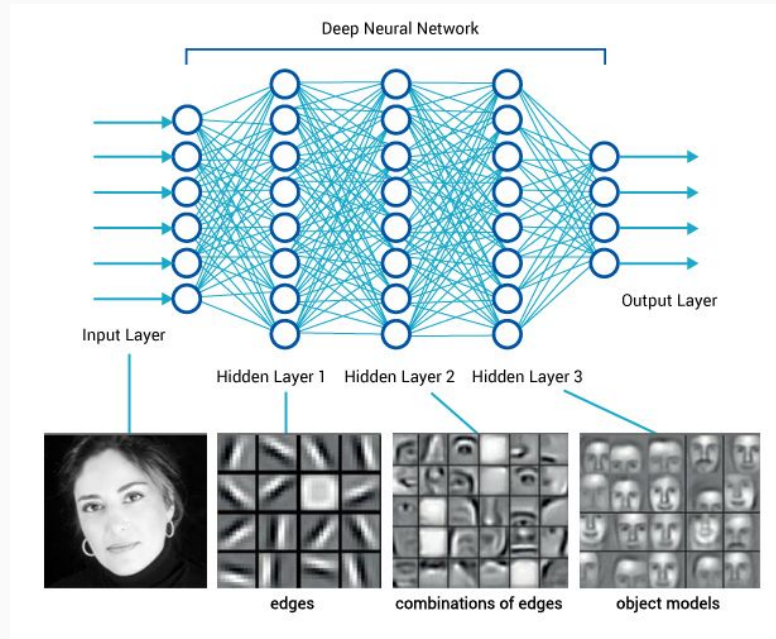
$x_1 = 0$ and $x_2 = 0$ then $g(-30) \approx 0$

$x_1 = 0$ and $x_2 = 1$ then $g(-10) \approx 0$

$x_1 = 1$ and $x_2 = 0$ then $g(-10) \approx 0$

$x_1 = 1$ and $x_2 = 1$ then $g(10) \approx 1$

Deep Learning



Artificial Intelligence

The attempt for a system, computer or device to be as or more intelligent than a human being.

HW
Robotics

SW
Machine Learning

A technique that by finding patterns in large amounts of data manages to learn and help to make systems as intelligent as a human.

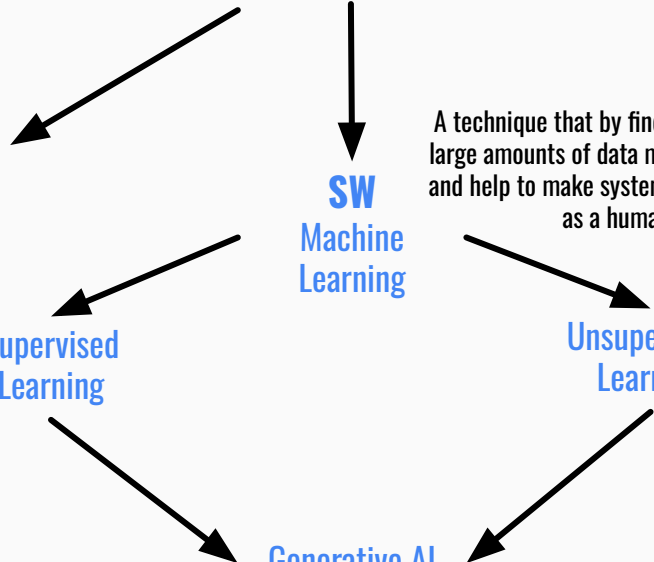
Supervised Learning

Unsupervised Learning

It guides to the correct answer, produces predictions whether numerical or for classification.

It creates groups of data based on similarities.

Generative AI



It specializes in creating new and original content.

Generative AI models can produce text, images, music, and other types of content that did not previously exist.



These models are trained with advanced algorithms to learn from a large amount of data and then use that learning to generate new creations.



Complement, not replacement.

Important Terminology

Natural Language Processing (NLP)

Large Language Models (LLMs)

Prompting

Hallucinations

Fine-tuning

Token

Data is the new fuel





LISTEN UP

Shortage of data causing Samsung troubles in launching Bixby Voice for the U.S.

BY ANDREW MARTONIK 🕒 Wednesday, Jul 5, 2017 at 1:41 pm EDT

💬 23 Comments

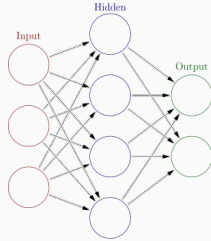
“The delay comes from a handful of issues with the service but is driven by a lack of usage data that's ultimately required for the machine learning systems to work at their full potential”

¿What are some companies using ML & Data for?



Timeline

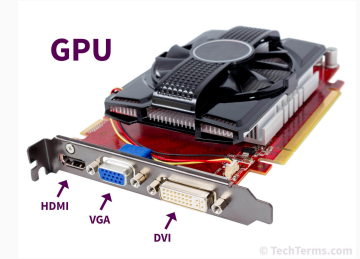
1943



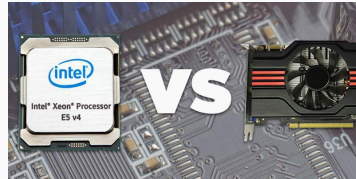
1969



2006



2012



2024



Imagine a Shoe

How is the shoe in your mind?



Seat belts are less safe for women

A lot less safe.

ACCESSORIES & PERIPHERALS

It's Not You, It's It: Voice Recognition Doesn't Recognize Women

By Graeme McMillan [@graemem](#) | June 01, 2011