Comprendre et utiliser les algorithmes de *Machine learning*

Season 1 – Machine Learning

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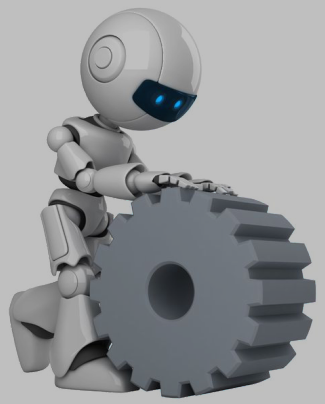
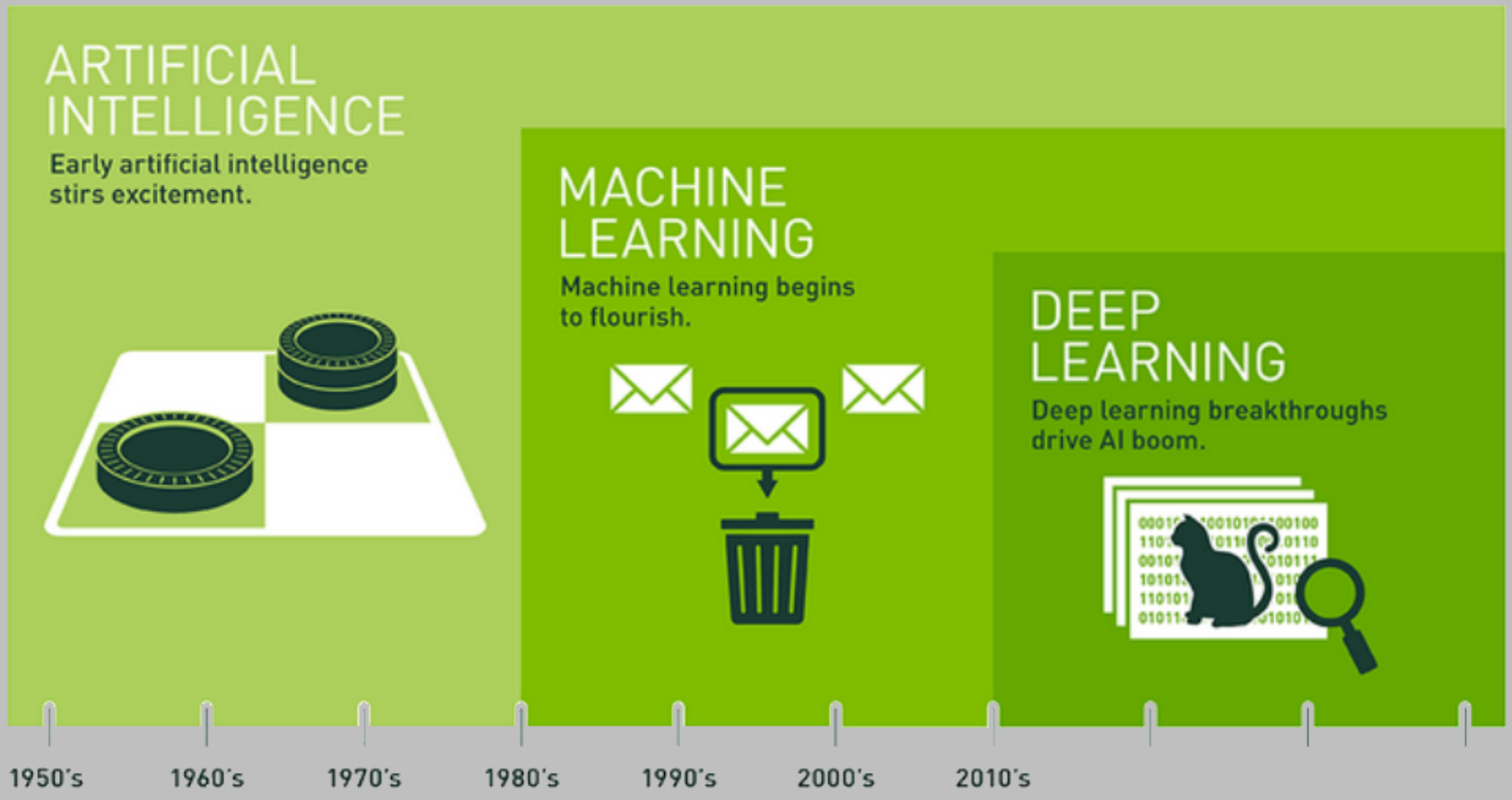
ARTS ET MÉTIERS ParisTech
Bordeaux - Talence



The historical way...



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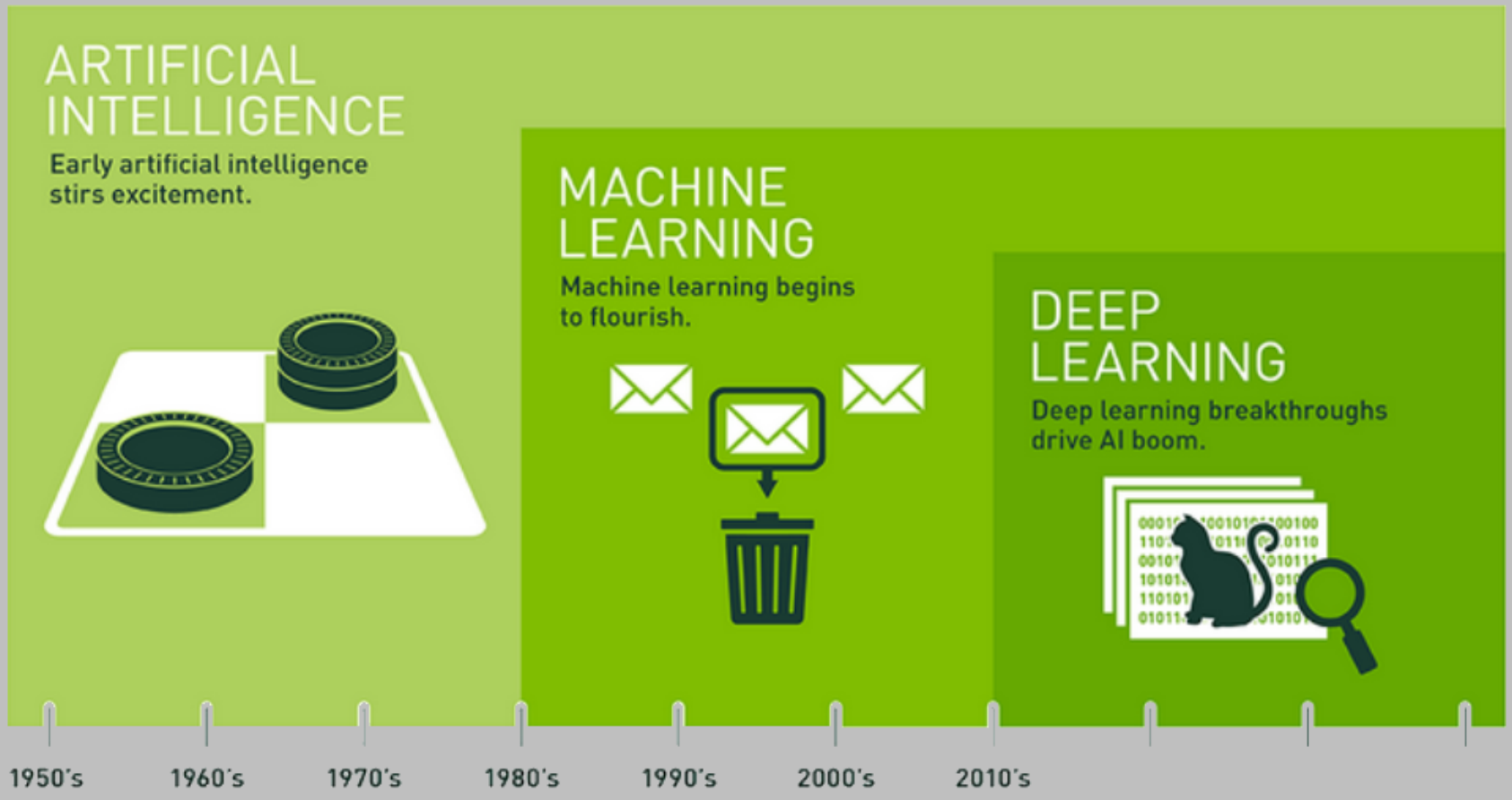
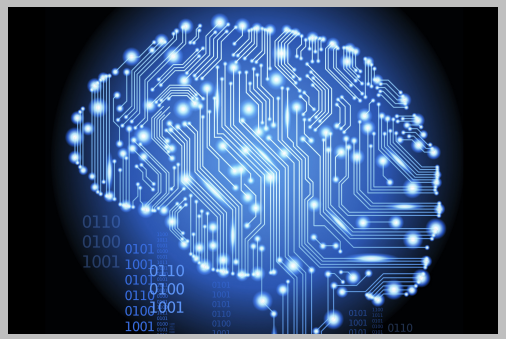


Let's start with **Artificial Intelligence**

and **Machine Learning**...

AI Definition...



via www.pepite-sc.com

The exact definition for “artificial intelligence” is a bit fuzzy and changes over time:

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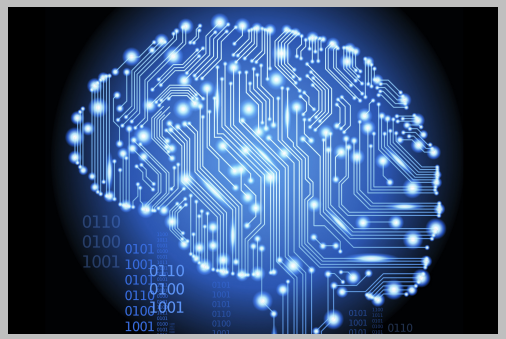

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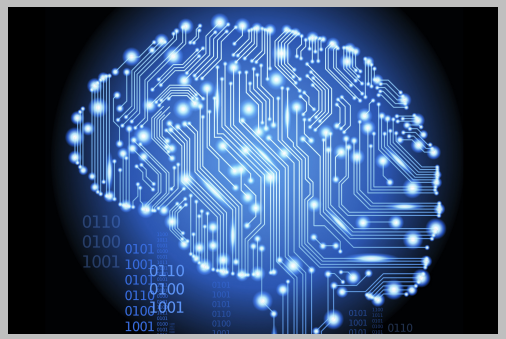

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- ”...the science of making computers do things that require intelligence when done by humans.” www.alanturing.net

AI Definition... [1]

Strong AI

- Build systems that think exactly the same way that people do.
- Try also to explain how humans think...
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Narrow AI

AI recent spots

- May 11, 1997, the IBM computer Deep Blue beat the world chess champion.
- 2015 Google trained a conversational agent that could interact with humans, discuss morality, express opinion....
- 2015 Google deepmind developped an agent that surpassed human performances at 49 Atari games

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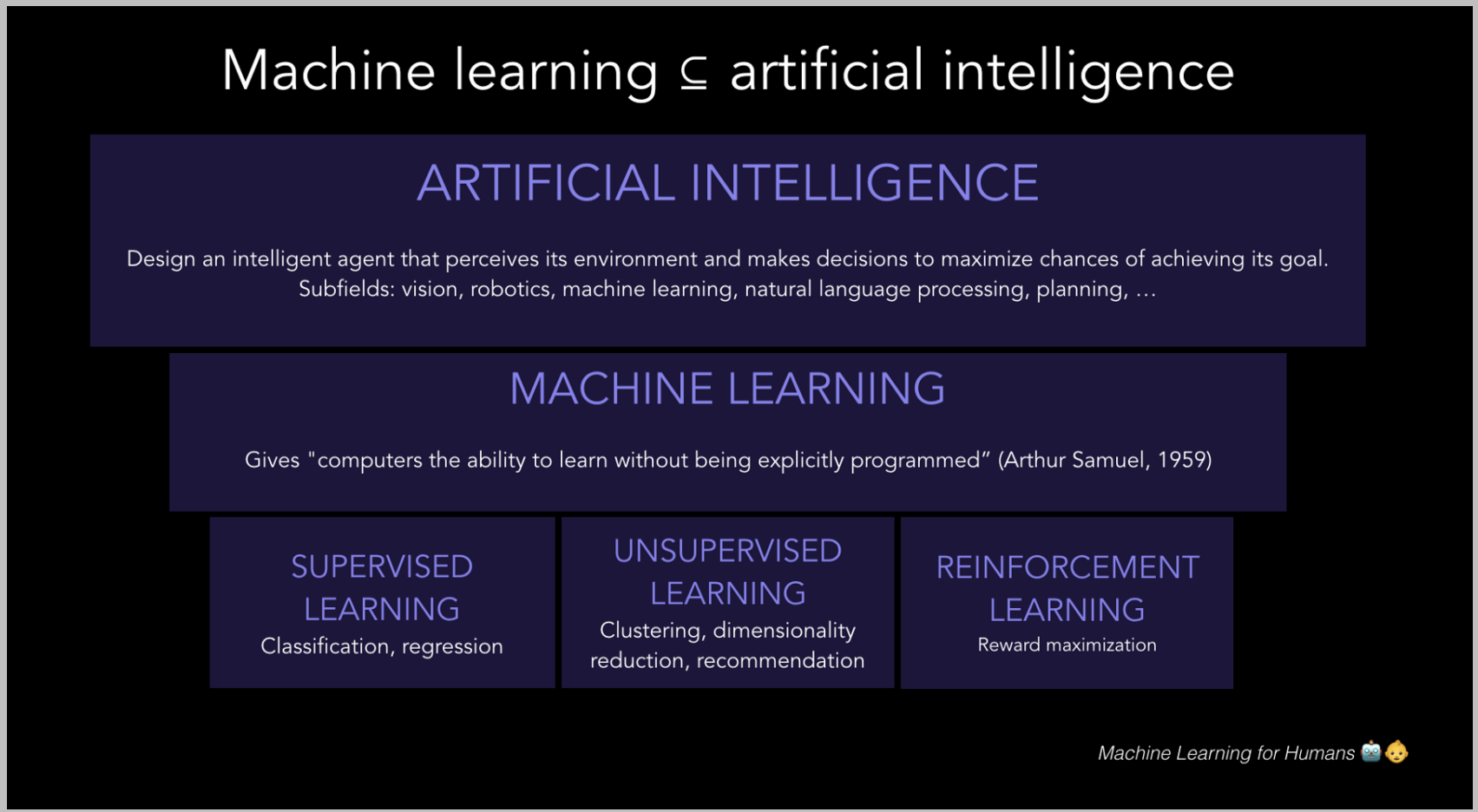
- Will shape our future more powerfully than any other innovation this century

Machine Learning in Artificial intelligence



(figure from medium.com/machine-learning-for-humans/why-machine-learning-matters-6164faf1df12)

Branches of Machine Learning

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- **Unsupervised learning**
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- **Reinforcement learning**
  Reward maximisation
  Control/command (robots, drones...)
  Decision making (games, financial analysis...)

Biliography

[1] “What is artificial intelligence (AI), and what is the difference between general AI and narrow AI?”
https://www.computerworld.com/article/2906336/emerging-technology/what-is-artificial-intelligence.html