

Catching up IA

"Reproducing human behaviors"

- BCE, Pygmalion
- 1748, Julien Offray de La Mettrie, L'Homme Machine
- 1872, Samuel Butler, Erewhon





AI in computer science

A function acting as a human

Isn't since the beginning?

```
const r = (a, b) => a + b
```

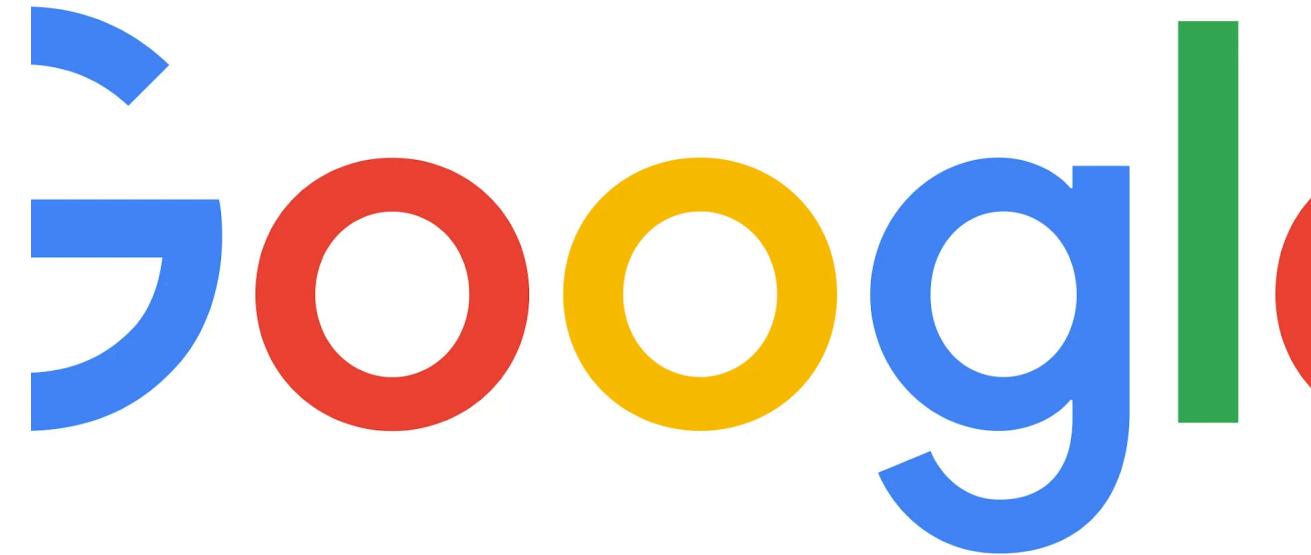
Is DeepBlue AI?

Not anymore



Is Page Rank Algorithm AI?

| Not anymore



Learning is the key

Alex Krizhevsky, 2016



Learning is old

These

Claude Shannon, 1950



Blurred, shifting zone, 'brilliant,' of what almost works, bluff.

Cédric Villani

Learning in computer science

$$y = f(x)$$

Learning in computer science

$$y_1, y_2, y_3 \dots = f(x_1, x_2, x_3 \dots)$$

Learning in computer science

Resolving equations

$$\begin{aligned}y_1 &= a \text{ } \underline{-} \text{ } x_1 + b \\y_2 &= a \text{ } \underline{-} \text{ } x_2 + b\end{aligned}$$

=>

$$\begin{aligned}a &= \dots \\b &= \dots\end{aligned}$$

Learning in computer science

$$y = f(x)$$

Without IA:

- Humans define `f`

With IA:

- Humans define `t` which will find `f`

Learning in computer science

Finding a minimum

$$\text{Cost}(x_1, x_2, x_3 \dots) = Y[\text{expected}] - Y[\text{found}]$$

Learning in computer science

Models

Deep Learning in computer science

Image recognition

Speaking in computer science

Words

Speaking in computer science

Tokens