

Ways to measure intelligence

Tom Rochette <tom.rochette@coreteks.org>

February 6, 2021 — [9686e64b](#)

1 Question

What are the different ways to measure intelligence?

2 Answer

We can measure intelligence as:

- the number of CPU cycles necessary to solve a problem. Less is better.
- the amount of energy spent by a system to solve a problem. Less is better.
- the time necessary to solve a problem. Less is better.
- the space (memory, RAM, atoms) necessary to solve a problem. Less is better.

The benefit of all those measurements is that they are scalar and thus ordinal, creating an order between the different agents that can successfully solve the problem.

Those values can be taken separately as one axis of intelligence. Taken together, they become a complex measurement of intelligence where there's no clear ordering between the different approaches. The agent with the "highest intelligence" is defined by the requirements of the environment: if energy sources are abundant in the environment, then using little energy is less important than using less time or space.

3 Reference

- [Intelligence](#)