Artificial Intelligence in a Nutshell and Beyond...
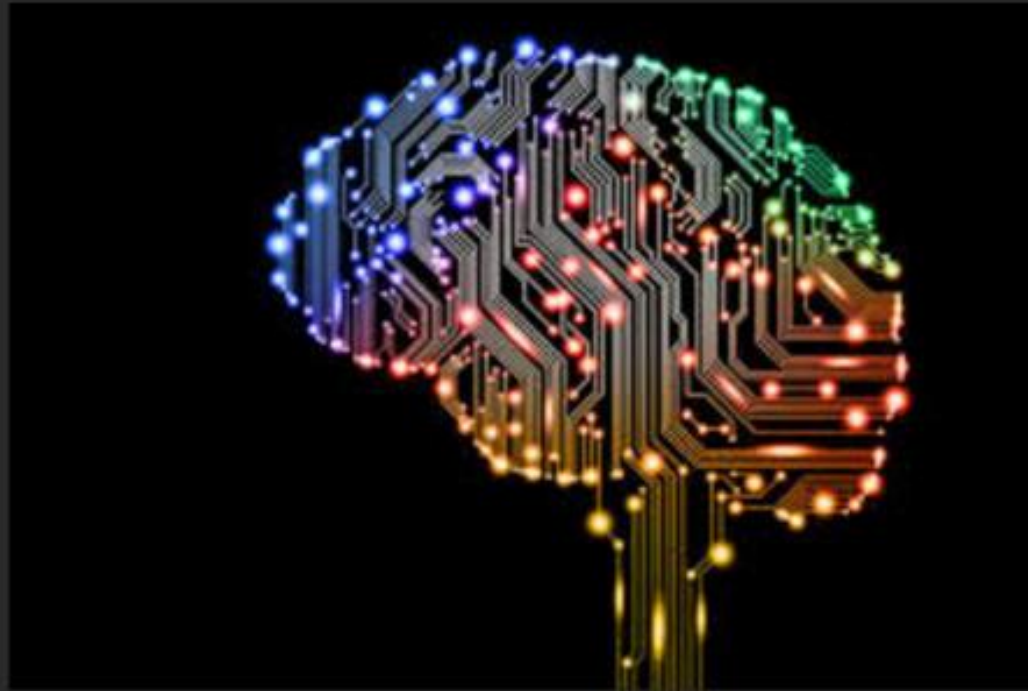
By Adam W. Czerwinski

What does is mean?

ARTIFICIAL
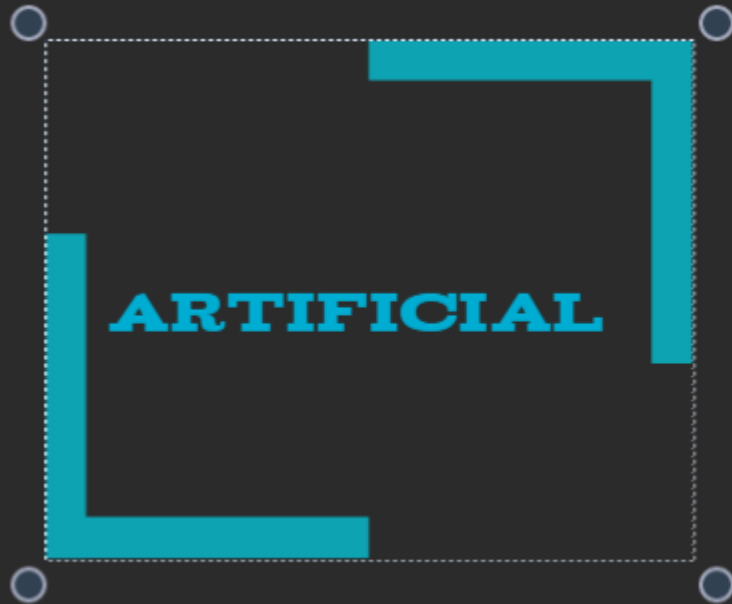
INTELLIGENCE

Artificial

Made by humans, especially in imitation of something natural

Not arising from natural or necessary causes; contrived or arbitrary

Intelligence

Intelligence has been defined in many different ways including as one's capacity for logic, understanding, self-awareness, learning, emotional knowledge, planning, creativity and problem solving.

More generally described as the ability to perceive information, and retain it as knowledge to be applied towards adaptive behaviors within an environment or context.
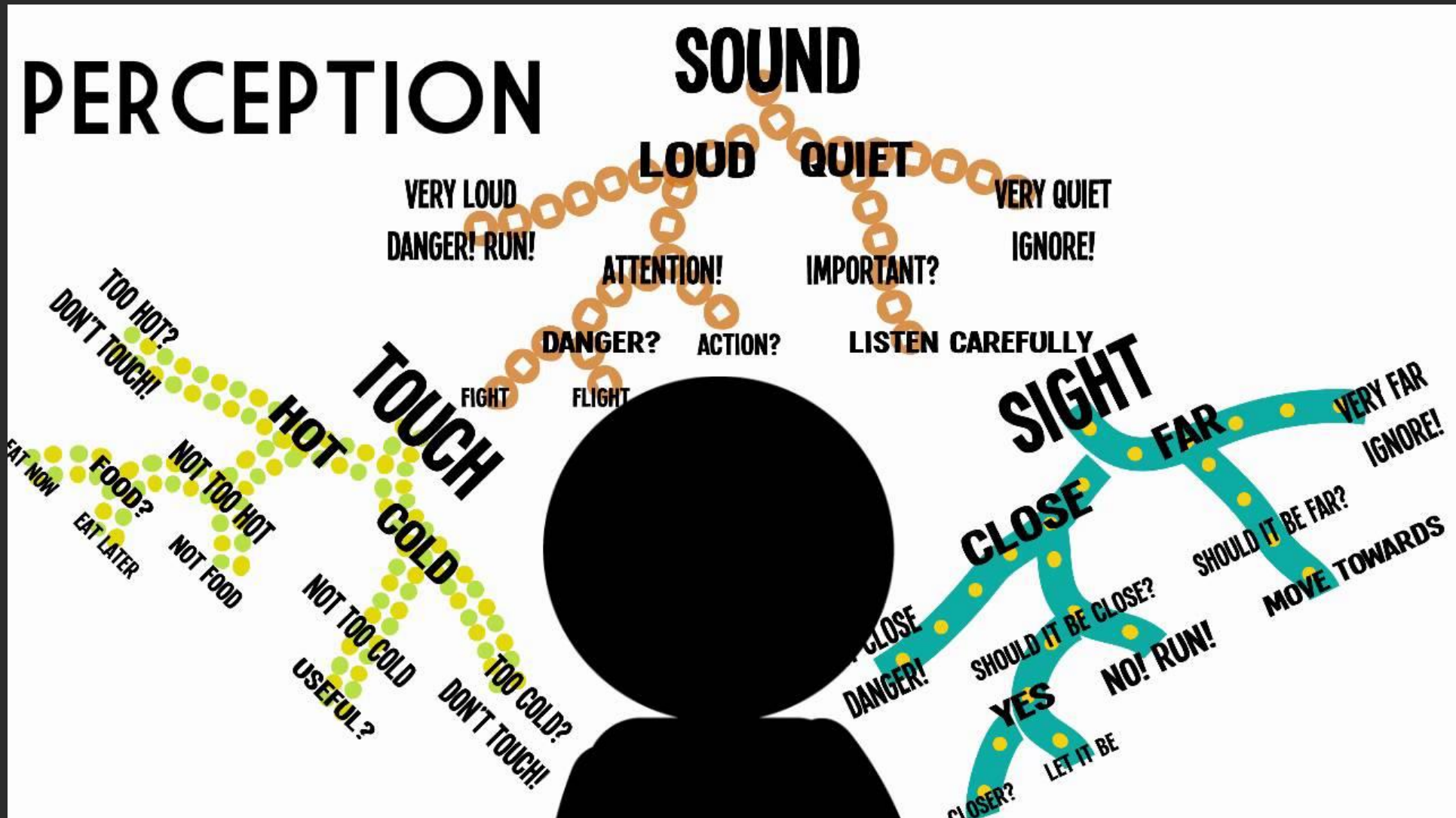
True Meaning

ARTIFICIAL + **INTELLIGENCE**
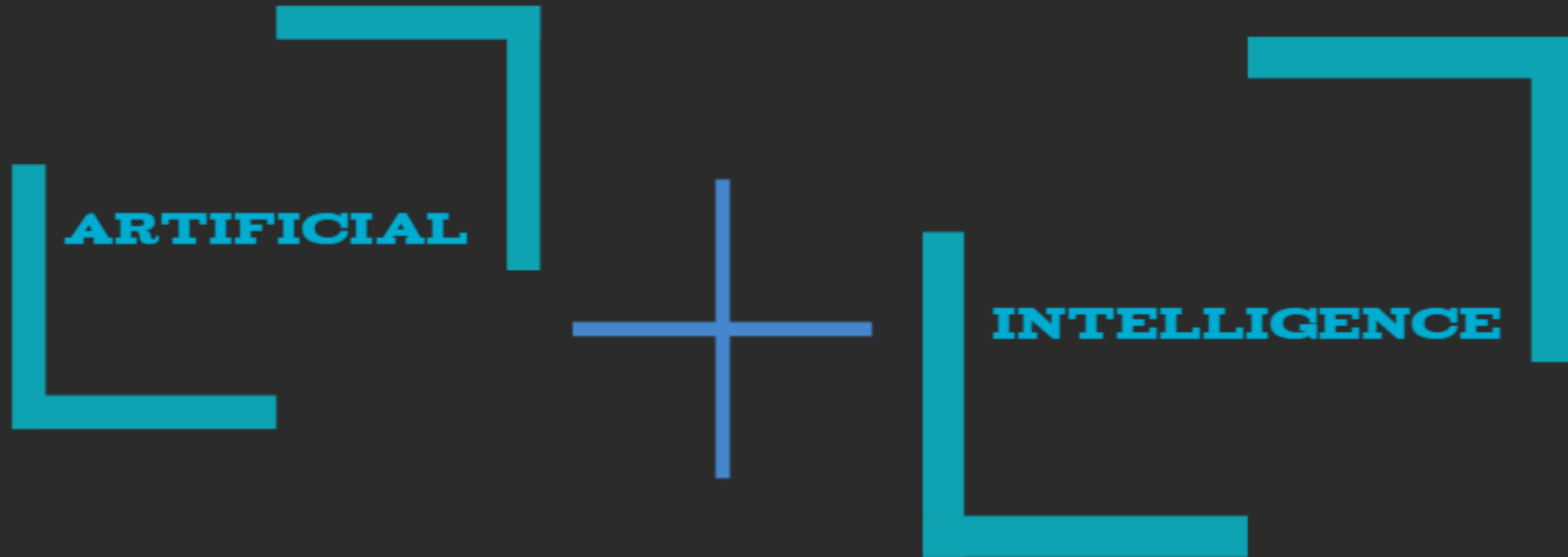
The ability made by humans (not natural) to perceive information, that can be applied towards adaptive behaviors within an environment or context.

Perceive Information?

How *smart* are we?

Human beings have bad sight, bad hearing and a bad sense of smell. We're not particularly strong either. So how did we become the planet's dominant species?

"It's only because of our brain,"

"Other than that we are pretty ill-equipped animals."

-Heinrich Reichert

How *smart is one of the worlds* best AI computers today?

Just as smart as a 4 year old!

The computer took a IQ test

Did well with logical questions

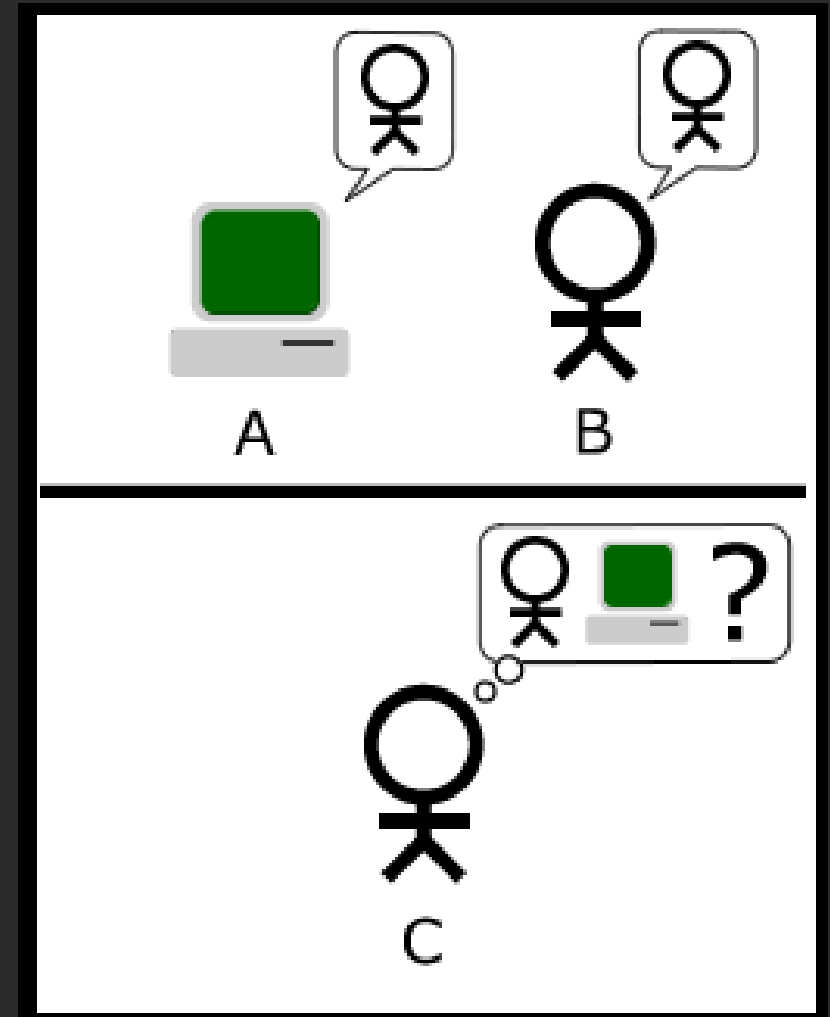Had trouble with the "why" questions

Long way from developing computers with "common sense"

Children develop this at the age of 8

How do we measure an AI?

The Turing-test by Alan Turing in 1950

- A machine's ability to exhibit intelligent behavior equivalent to, or indistinguishable from, that of a human

Where do we use AI today?

1. IBM Watson wins Jeopardy demo's integration of natural language processing, machine learning (ML), and big data.

2. Siri/Google Now redefine human-data interaction.
AIs will move from speech recognition to natural language interaction, to natural language generation.

3. Deep learning demonstrates how machines learn on their own, advance and adapt.

4. Image recognition and interpretation now rivals what humans can do — allowing for imagine interpretation and anomaly detection.

5. AI Apps bloom: universities scramble to adopt AI curriculum

In a future .. Not so far away!

1. Next-gen A.I. systems will beat the Turing Test

2. All five human senses (yes, including taste, smell and touch) will become part of the normal computing experience.

3. Solving big problems: detect and deter terrorism, manage global climate change.

4. Leverage ALL health data (genomic, phenotypic, social) to redefine the practice of medicine.

5. AI will be woven into the very fabric of our lives — physically and virtually.

In a future... far far away!

Skynet ??

Human focus will be on deep space exploration??

Humanoids??

THANK YOU !