NL Testdag
6 November 2018

Testing with AI

Where will self-learning tools take our testing profession?

TestNet workgroup

SALVES

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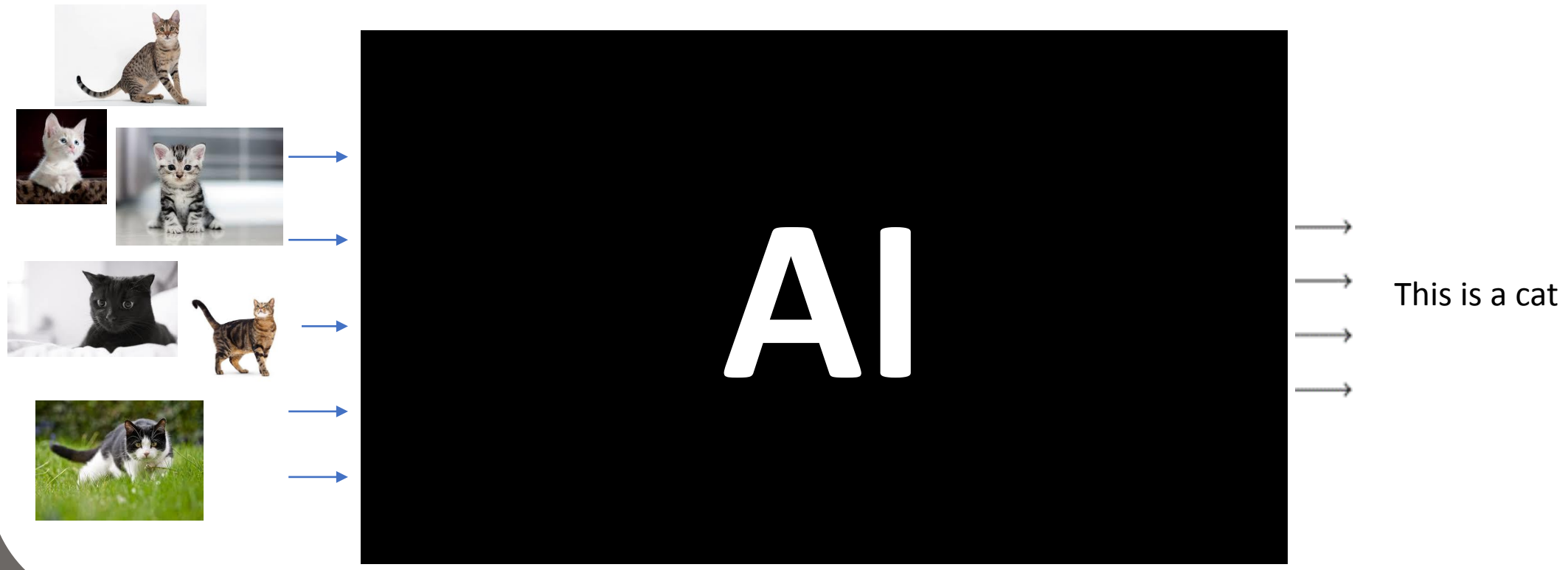
What is AI

Artificial intelligence:
Using computers to mimic human intelligence in performing certain tasks.

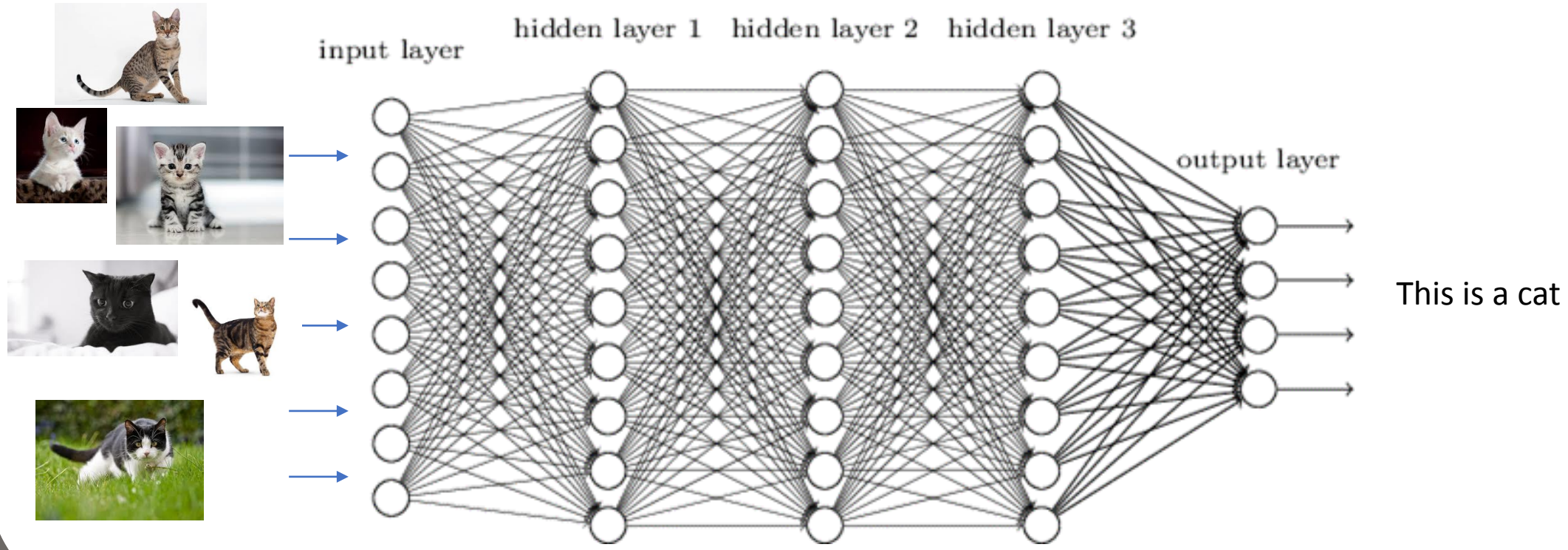
Machine learning / deep learning:
Make the computer use data
to improve its intelligence over time.

So we're moving from programming to learning.

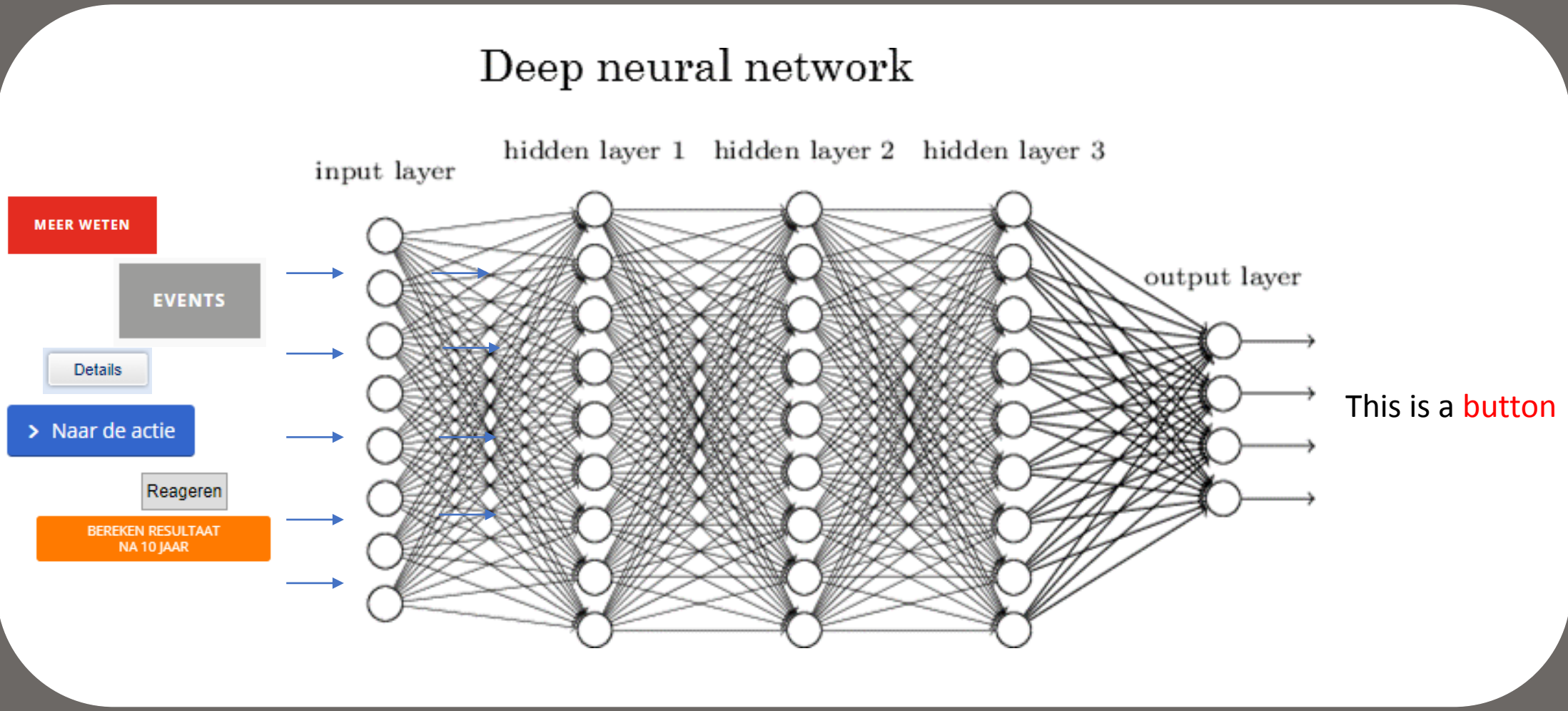
AI can recognize images



AI can recognize images



Object finding in testing



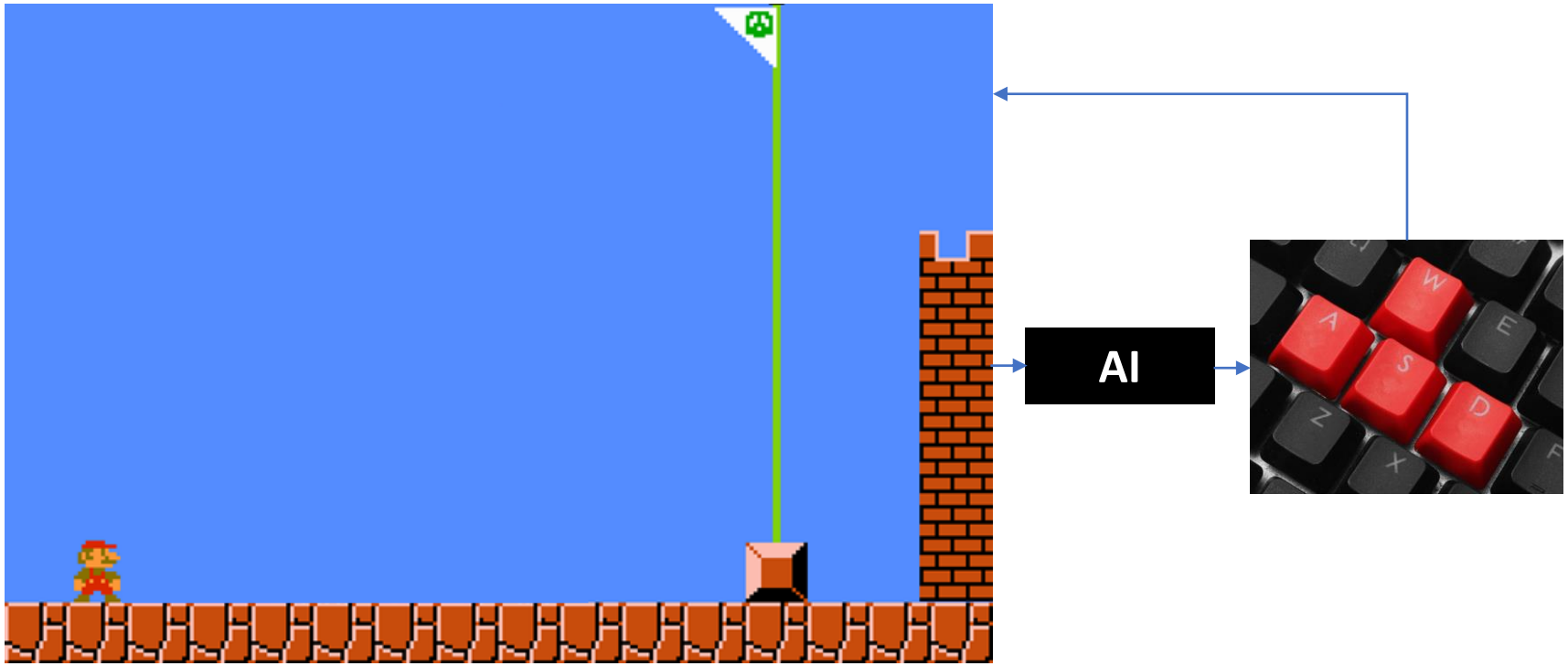
This is a button

AI can find paths

Mar I/O

Reward for touching the flag

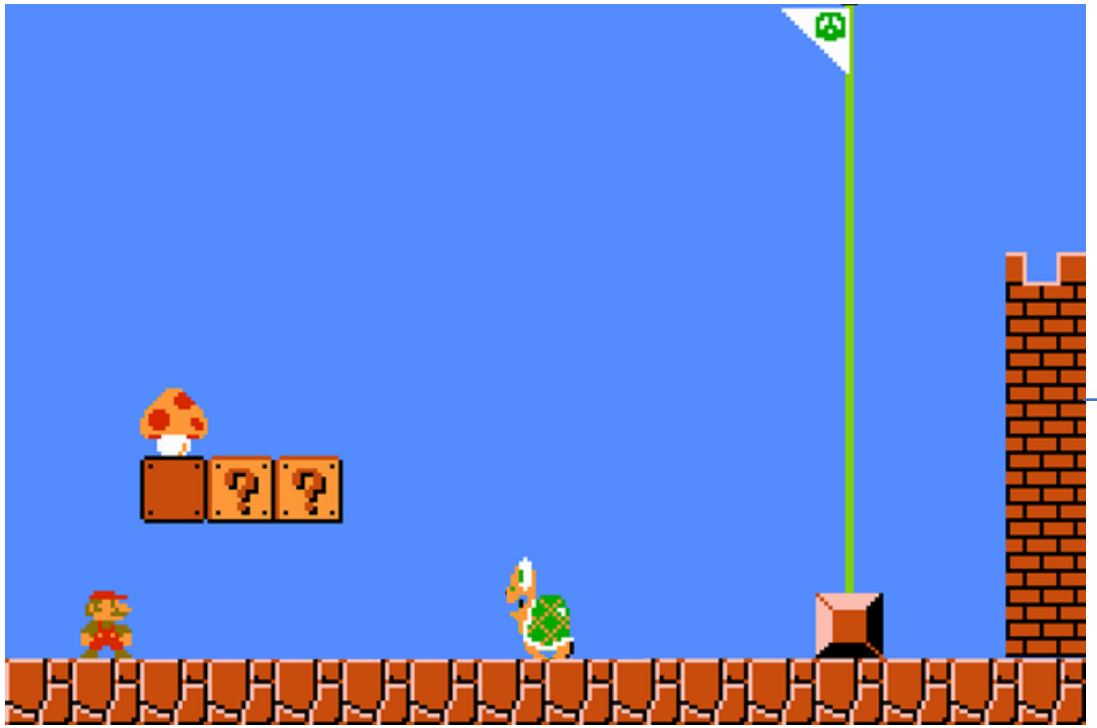
Learning by doing



AI can find tough paths

Mar I/O

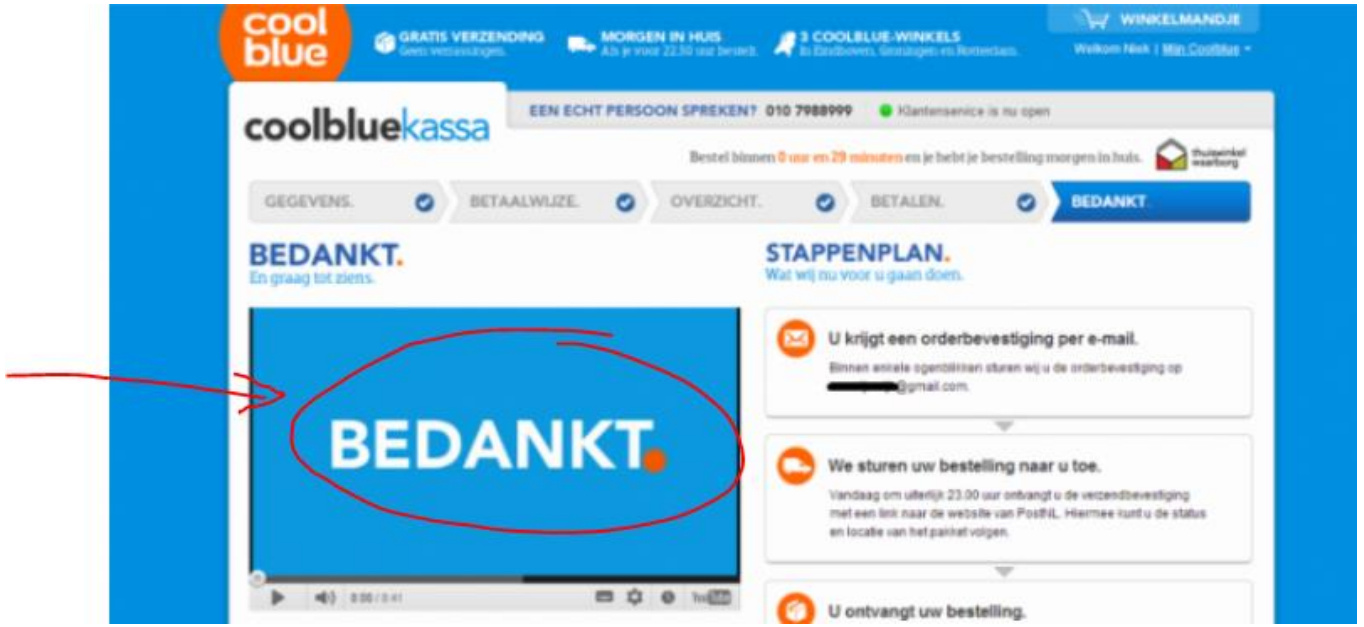
It can learn tough scenarios as well, it just takes a bit longer



AI

Path finding in testing

It could also find it's way to certain objects or images, anywhere in our application.



AI can process texts

It can **find correlation** between words, both written and spoken.

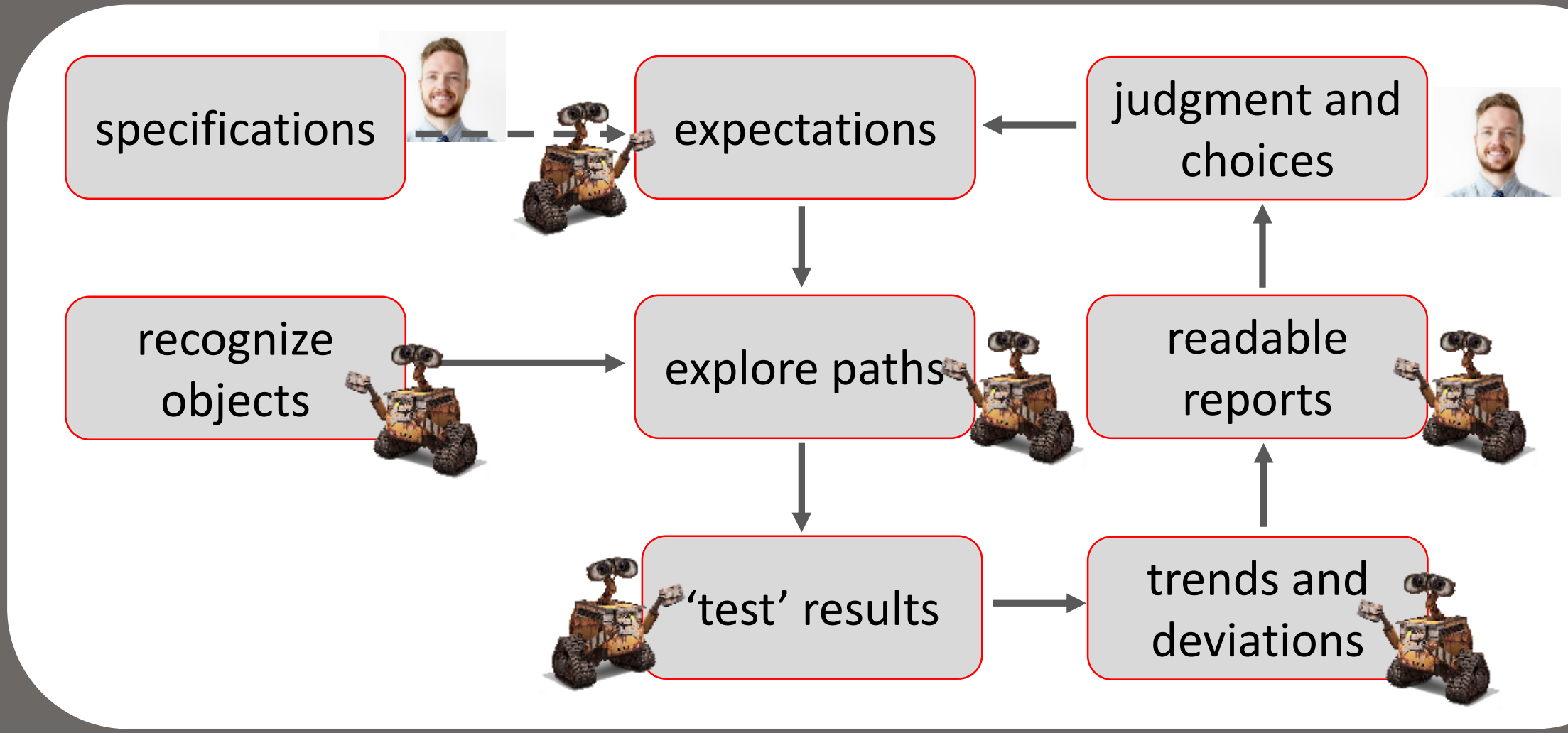
It can **generate** text, as translation, as summary or just based on words that have to be used.

Text processing in testing

AI could read our requirements and generate models to find what is important and what has risks.

AI could find inconsistencies in documentation and in log files of our tests, and report them.

The AI can test!



Quite a few tools are adding AI

Functionize

Testrigor

And many more …

Main implications for the testing profession

i.e. should we pack our bags?

Business driven test scripts

"When I'm on our website,
I should be able to search for OLED TV's,
sort by price (ascending)
and put the top option in my cart."

No coder or tool specialist needed!
What you ask is what you test (WYAIWYT?)

Global sharing

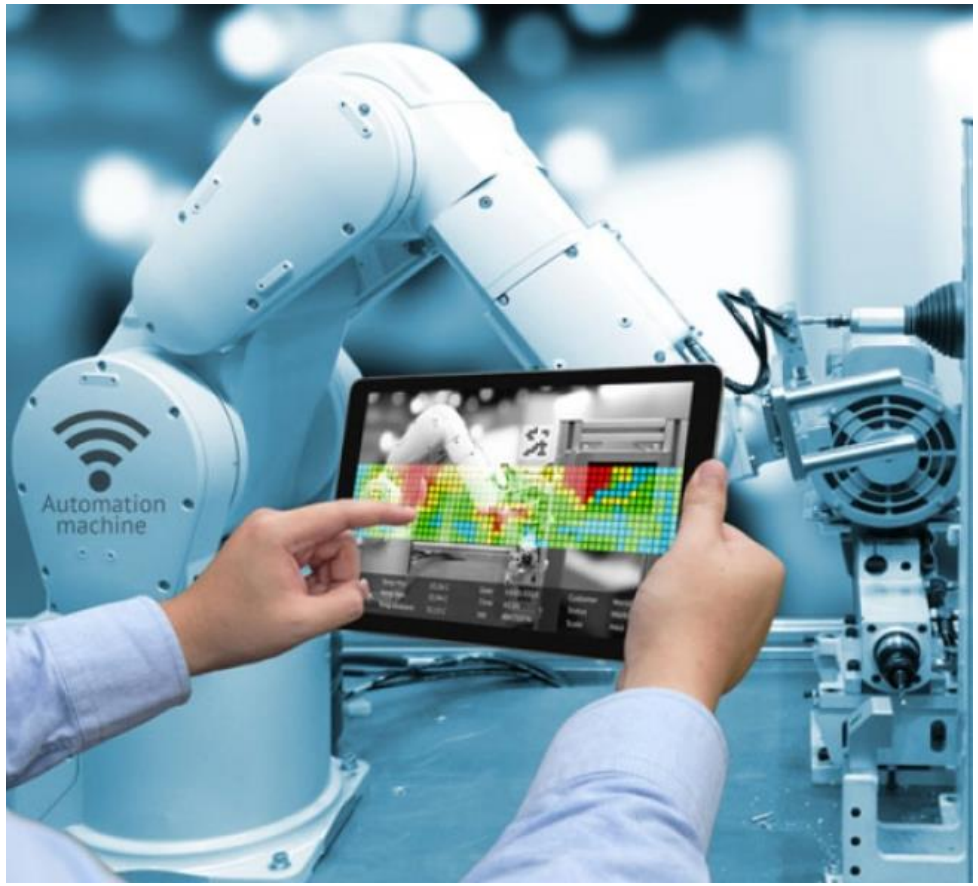
- Object detection
- Test steps
- Bug information
  (such as bug clusters
  or bug severity indicators)
- Test data

Much lower maintenance

1. Due to global sharing of objects, test steps, test cases, test data, etc.

2. Due to business driven test cases, no programmed tests to maintain.

3. 'Self healing' tests, so finding new objects and new paths where necessary to reach the goal.



‘Perfect information’

AI helps to find gaps in requirements and designs, compare to architecture principles and IT landscape constraints.

AI helps to direct our testing efforts to the most important, most bug-prone parts of the application (chains).

Our work

What is **new**? We'll have to

1) understand AI and demystify it to be able to trust it.
2) know our company and how AI will be used. It may have impact!
3) guard ethics even more strongly.
4) learn from data scientists, data is now part of our application.

Our work

What is the **same**?

1) We are the quality conscienceness, we ask the tough questions.
2) We think ahead and foresee where things go wrong.
3) We are analytical and see details and exceptions that most others miss.
4) We are the glue, we communicate well even when the rolling gets rough.

Don't get scared now, we're in pretty good shape!

Join us!


Lid
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