Impact of Artificial Intelligence for the Digital Economy

Chair: Stuart McRae, Executive Collaboration & Talent Evangelist, IBM
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Who do you think I am?

*Identity in the cognitive era*

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Turing test, in artificial intelligence, a test proposed (1950) by the English mathematician Alan M. Turing to determine whether a computer can “think.”

Turing sidestepped the debate about exactly how to define thinking by means of a very practical, albeit subjective, test: if a computer acts, reacts, and interacts like a sentient being, then call it sentient.
What is Artificial Intelligence?

Artificial intelligence (AI), the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings.
Augmented Intelligence

Cognitive Systems...

UNDERSTAND
imagery, language, and other unstructured data like humans do.

LEARN
with each data point and interaction, they develop and sharpen expertise. They never stop learning.

REASON
by grasping underlying concepts and forming hypotheses to infer and extract ideas.

INTERACT
with abilities to see, talk, and hear, cognitive systems interact with humans in a relatable way.
How many people in the world regularly use an AI system?
How many people in the world regularly use an AI system?
How many of the apps on your iPhone use AI already?
Identity

Access  Personalisation

Trust  Privacy
Assessing confidence is something cognitive systems do...
Access

Given all our interactions so far, how confident am “I” that

• you are who you claim to be
• you are allowed to do what you just asked to do
• you want me to do <something>

A cognitive assessment of risk
Access Example: Frictionless Authentication

Data Used: PIN, Device ID, location, time of day, IP address, Facebook/Oauth logins, fingerprint, camera, voice, typing/gesture styles, calendar? recent behaviour? health? gait? social media posts?

Low trust
Strict authentication required for all tasks – lowest trust, highest friction.

Medium trust
Some tasks possible without authentication – high friction only for high-risk.

High trust
Tasks possible without additional authentication – low friction even for some high-risk.

bit.ly/FrictionlessAuth
Personalisation

Cognitive systems will take personalisation to the next level, but...

- Will you understand their use of your personal data?
- Will we understand how they are using personal data?
- Will we be able to remove personal data from them?
- How about what they learnt from personal data?

... *personal, without being creepy*
Trust

There are two sides to every question of trust...

- Is each user really who they say they are?
- Can users trust the service they are interacting with?

*Confidence will be built over time*

*... and continually reviewed*
Privacy

Cognitive systems demand a shift in focus

• from what information you hold and who can access it
• to what you do with it

*Interpreting GDPR for the Cognitive Era will take time*

... and require a focus on desired outcomes as much as current defined rules
"We tend to overestimate the effect of a technology in the short run and underestimate the effect in the long run"

- Amara's Law, Roy Amara, Institute for the Future
Affirmative, Dave. I read you.

I'm sorry, Dave. I'm afraid I can't do that.

I think you know what the problem is just as well as I do.

This mission is too important for me to allow you to jeopardize it.

-- HAL

2001: A Space Odyssey
Thank You.

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