Regional Forum on Emergent Technologies

AI Ethical Guidance

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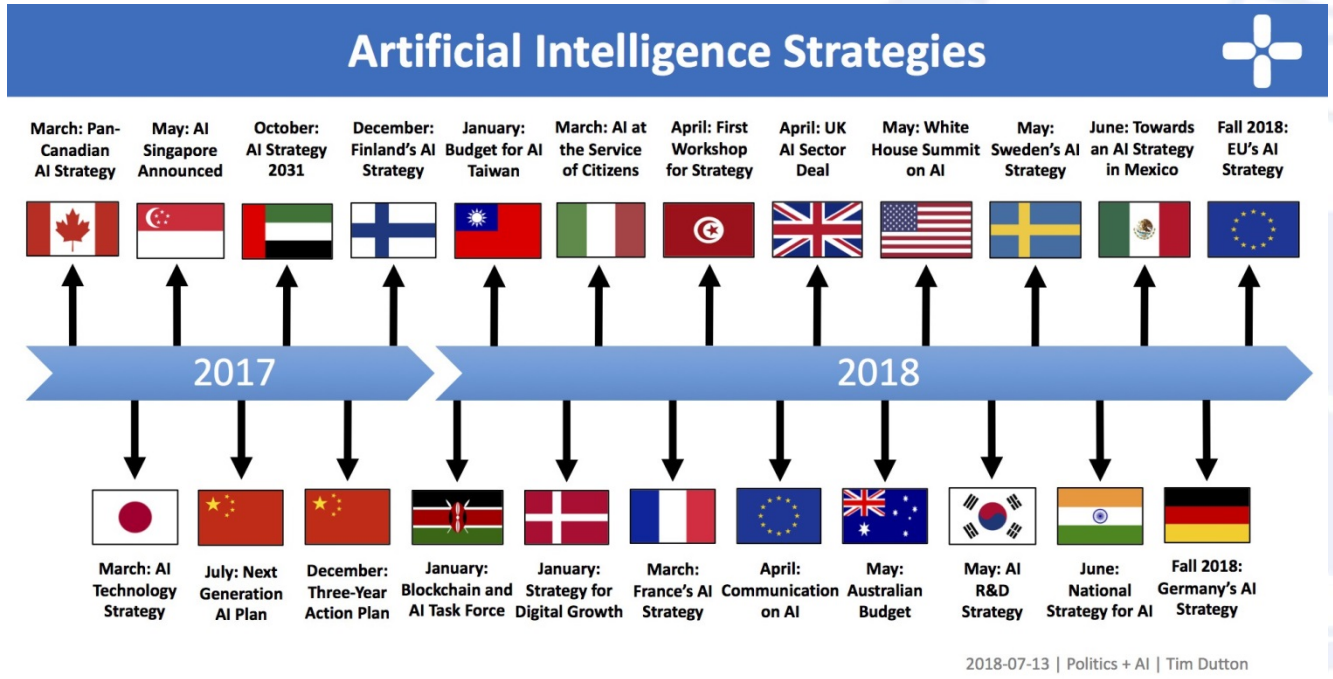
AI Strategies



- Aritificial Intelligence is such a hot and important topic that many countries are setting high level policies and goals.
- In general, to give a few examples, they aim at achieving world leadership, improve industrial competitiveness, or define goals for sustainable development and job creation

Source: Tim Dutton, An Overview of National AI Strategies, available at https://medium.com/politics-ai/an-overview-of-national-ai-strategies-2a70ec6edfd

Tunisia National AI Strategy

- Tunisia's Secretary of State for Research has created a task force and a steering committee to develop a AI strategy for Tunisia. The strategy was initially scheduled to be published in the first quarter of 2019.
- The primary goal will be to facilitate the emergence of an AI ecosystem that acts as a strong lever for equitable and sustainable development and job creation.
- Titled "National AI Strategy: Unlocking Tunisia's capabilities potential," this initiative was officially launched in April 2018 during a workshop hosted by the UNESCO Chair on Science, Technology and Innovation Policy, in partnership with the National Agency for Scientific Research Promotion-ANPR.

Source: http://www.anpr.tn/national-ai-strategy-unlocking-tunisias-capabilities-potential/

AI Definition

- European Commission's High-Level Expert Group on Artificial Intelligence recently made public a definition of AI in the following terms:

"systems that display intelligent behaviour by analysing their environment and taking actions – with some degree of autonomy – to achieve specific goals. AI-based systems can be purely software-based, acting in the virtual world (e.g. voice assistants, image analysis software, search engines, speech and face recognition systems) or AI can be embedded in hardware devices (e.g. advanced robots, autonomous cars, drones or Internet of Things applications)."

Source: High-Level Expert Group on Artificial Intelligence. A definition of AI: main capabilities and scientific disciplines. Definition developed for the purpose of the High-Level Expert Group's deliverables. 2018

Humans and machines

Humans are better

- Defining goals.
- Common sense (sometimes)
- Value judgement

Machines are better

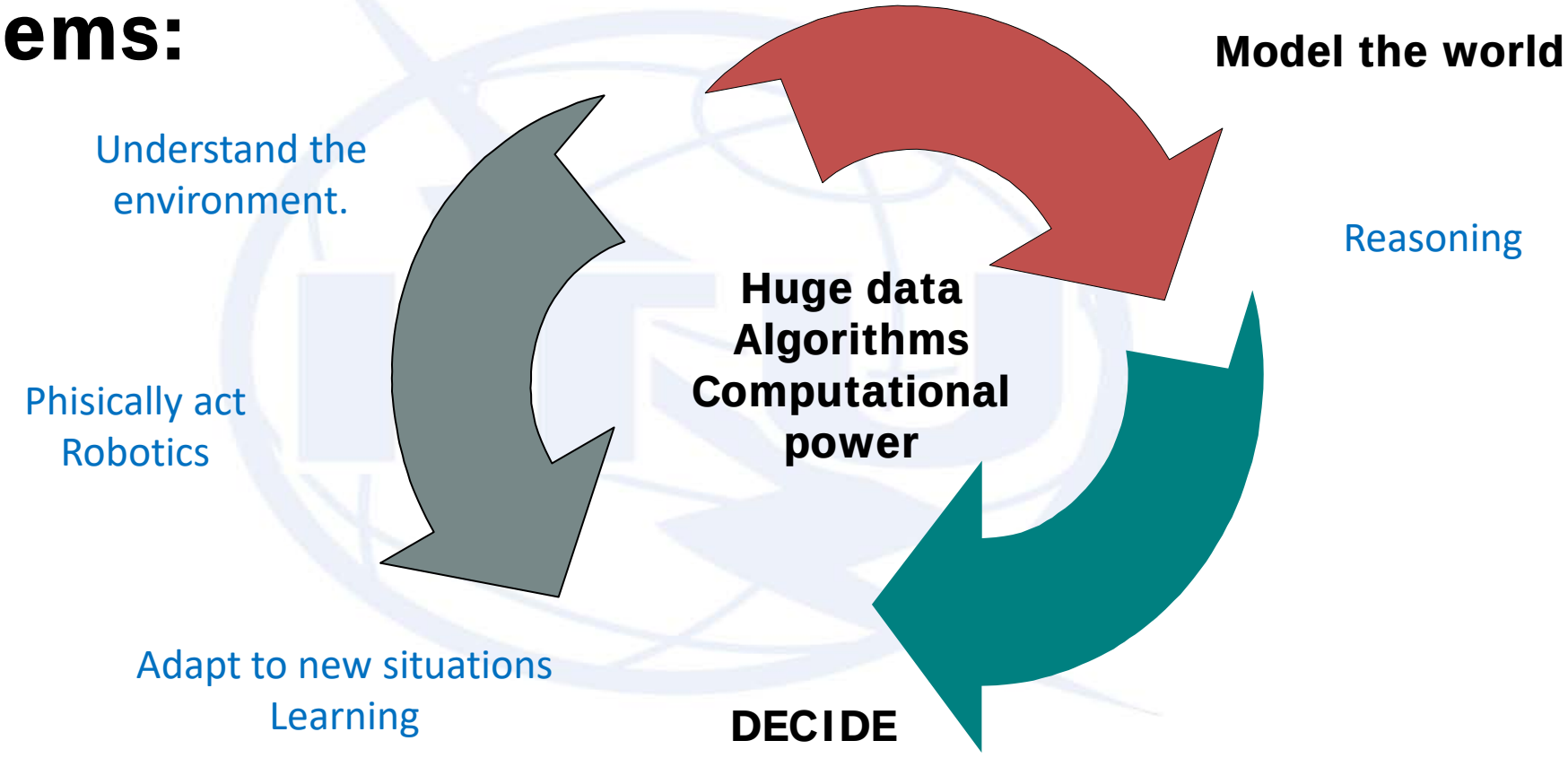
- Computational power
- Pattern discovery
- Statistical manipulation

So one can say there is some complementarity

Source*: ARTIFICIAL INTELLIGENCE: ETHICS, GOVERNANCE AND POLICY CHALLENGES, Report of a CESP Task Force*

AI is more than machine learning

AI Systems:



Source: High-Level Expert Group on Artificial Intelligence. A definition of AI: main capabilities and scientific disciplines. Definition developed for the purpose of the High-Level Expert Group's deliverables. 2018

AI systems limitations

Development of AI systems issues, some examples

Common sense	Need to provide some form of common sense to AI systems namely if our goal is to interact with them.
Data bias	Algorithms are very dependent on the quality of data.
Ethical behaviour	How can a machine help about ethical issues?

Why are ethical issues so important?

- Large societal changes
- Transparency and trust in the economic agents and policy makers developing AI systems
- Ethical behaviour of AI systems:
  - There is a need to discriminate between good and bad decisions
  - If systems are autonomous which means we delegate decisions to them
  - In systems which imply human-machine interactions since we require trust

Examples of Ethical issues in AI

- Web search
- Healthcare support systems
- Social media
- Driverless cars
- Robots to support senior people: how they must behave in face of different cultures or social norms?

AI Ethics challenges

- Which/whose Ethical principles?
  - There is no universal set of ethical principles
  - They are cultural or sometimes even task specific
- Embedding professional codes such as existing professional codes of conduct and ethical principles
- Guidance on which cases might be problematic from the standpoint of the application of identified principles

Ethical guidance initiatives

- Some considerable effort has already dedicated to the elaboration of Ethical principles lists that should be followed when developing AI systems:
  - The Asilomar AI Principles;
  - The Montréal Declaration for Responsible AI;
  - Several versions of the IEEE “Ethically Aligned Design: A Vision for Prioritizing Human Well-being with Autonomous and Intelligent Systems”
- A more valuable one is ITU’s “AI for Good Global Summit”, which focuses on the uses of AI that can help the global community achieve the Sustainability Development Goals.

Thank you