Examining the Landscape of Machine Intelligence Challenges for Lawyers

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AI

- The theory and development of computer systems able to perform tasks normally requiring human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.

    - Using computers to solve problems or make automated decisions for tasks that, when done by humans typically require intelligence.
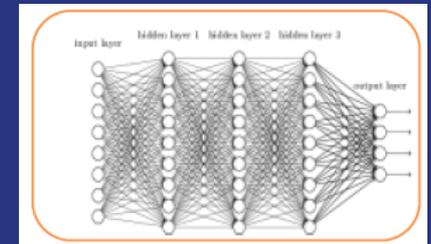
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AI in 2019

- "Strong" Artificial Intelligence
  - Computers thinking at a level that meets or surpasses people
  - Computers engaging in abstract reasoning & thinking
  - This is not what we have today. There is no evidence that we are close to Strong AI
- "Weak" Pattern-Based Artificial Intelligence
  - Computers solve problems by detecting useful patterns
  - Pattern-based AI is an Extremely powerful tool
  - Has been used to automate many processes today
  - Driving, language translation etc.
  - This is the dominant mode of AI today

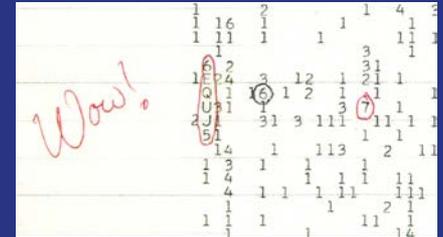LSE Law

AI in 2019: Techniques

- Logic and Rules-Based Approach
    - Representing processes or systems using logical rules
    - Top-down rules are created for computer
    - Computers reason about those rules
    - Can be used to automate processes
- Examples
    - Compliance Systems
    - Expert Systems
    - Attorney Workflow Rule Systems
    - Automated Document Assembly

AI in 2019: Techniques

- Machine Learning
    - Algorithms find patterns in data and infer rules on their own
    - They Learn from data and improve over time
    - These patterns can be used for automation or prediction
- Examples
    - AI in Litigation - E-Discovery etc.
    - Natural Language Processing (NLP) of Legal Documents
    - Automated contract analysis
    - Predictive Analytics for Litigation

AI in 2019

- Very good on the "A" less good on the "I".
    - (Apparently) Intelligent Results Without Intelligence.
    - Systems can provide results for some (not all) complex tasks requiring intelligence
    - BUT Intelligent Results produced without Intelligence
    - You can get "intelligent" automated results without intelligence by finding suitable proxies or patterns

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Proxies for Intelligent Results Without Intelligence
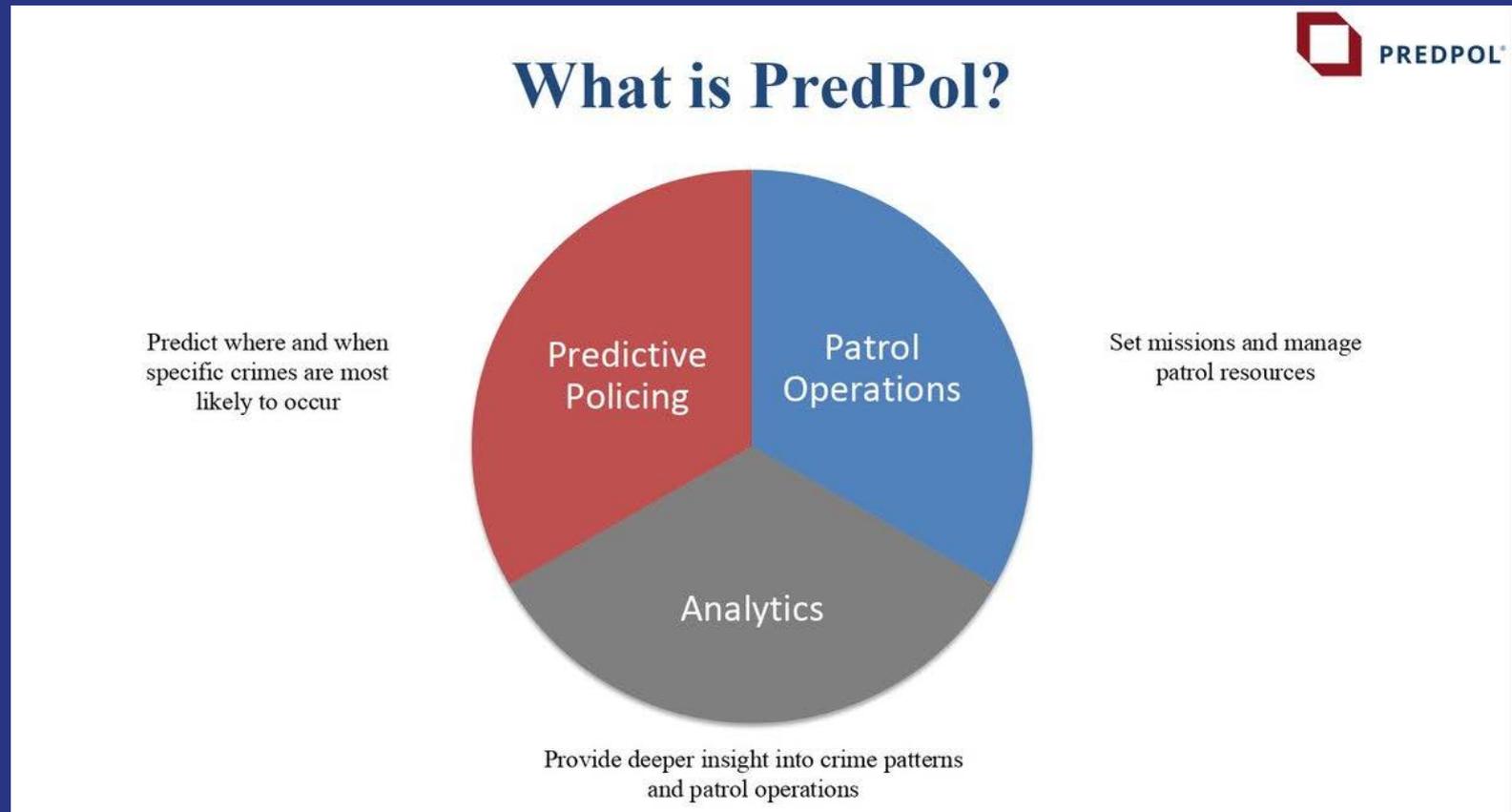

- Advanced cognitive skills to used to translate

- Google finds statistical correlations by analyzing previously translated documents.

- Statistical Machine Translation produces automated translations using statistical likelihood as a "proxy" for underlying meaning

Problems: Contextual Error

Problems: Bias

Problems: Bias

Google translate gets this correct:

She is a babysitter He is a doctor ✕ 🔊 ✏ 34/5000	O bir bebek bakıcısı O bir doktor ☆ ▢ 🔊 < ✏
O bir bebek bakıcısı O bir doktor ✕ 🔊 ✏ 33/5000	She's a babysitter He is a doctor ☆ ▢ 🔊 < ✏

But displays gender bias in this one:

She is a doctor He is a babysitter ✕ 🔊 ✏ 34/5000	O bir doktor O bir bebek bakıcısı ☆ ▢ 🔊 < ✏
O bir doktor O bir bebek bakıcısı ✕ 🔊 ✏ 33/5000	He is a doctor She's a babysitter ☆ ▢ 🔊 < ✏

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Problems: Not Intelligent

Your Lawyer will see you now...

Problems: Bias II (Humans)

Solution: Ethics?

- The High-Level Expert Group on Artificial Intelligence.
  - Ethics Guidelines for Trustworthy AI
    1. Human agency and oversight
    2. Technical robustness and safety
    3. Privacy and data governance
    4. Transparency
    5. Diversity, non-discrimination and fairness
    6. Societal and environmental wellbeing
    7. Accountability

- Problem – Ethics Washing (see Wagner)

Solution: Regulation?

- ## UK House of Lords AI Committee Report

  - ### (On Regulation) Witnesses fell into three broad camps:

    1. those who considered existing laws could do the job
    2. those who thought that action was needed immediately
    3. those who proposed a more cautious and staged approach to regulation.

  - ### Report favours Technological Neutrality

    - "The pace of change in technology means that overly prescriptive or specific legislation struggles to keep pace and can almost be out of date by time it is enacted" and that lessons from regulating previous technologies suggested that a "strict and detailed legal requirements approach is unhelpful" - Kemp Little LLP

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Solution: Regulation?

- ## UK House of Lords AI Committee Report
    - ### Technological Neutrality
        - "I would not have any one-size-fits-all answer. It is inappropriate and impossible to attempt to produce a regulatory regime which applies to all AIs" – Chris Reed

        - Blanket AI-specific regulation, at this stage, would be inappropriate. We believe that existing sector-specific regulators are best placed to consider the impact on their sectors of any subsequent regulation which may be needed. The Government Office for AI, with the Centre for Data Ethics and Innovation, needs to identify the gaps, if any, where existing regulation may not be adequate. The Government Office for AI must also ensure that the existing regulators' expertise is utilised in informing any potential regulation that may be required in the future.

Mebbes Aye Mebbes Naw!

Bad Men and Bad Ethics

Google DeepMind are an ethical company developing ethical products and the fact that the health data of 1.6 Million people was shared without a legal basis was the fault of the British government - Google DeepMind ethics team member.

In the technology policy world, where ethics, human rights and regulation are frequently played off against each other. In this context, the idea that ethical frameworks provide a way to go beyond existing legal frameworks is taken to mean that in some cases this may also mean ignoring them. - Wagner

The rise of the ethical technology debate runs in parallel to the increasing resistance to any regulation at all. - Wagner

Wagner, B. (2018). Ethics as an Escape from Regulation: From ethics-washing to ethics-shopping? in M. Hildebrandt (Ed.), Being Profiling. Cogitas ergo sum. Amsterdam University Press.

Bad Men and Bad Ethics

Ethics - even in an applied sense – is distinct from the law and human rights. Yet in this context the primary ethical framework being proposed is based on (some) EU fundamental rights while explicitly ignoring others. At the same time EU fundamental rights are not understood as fundamental rights but rather as ethical imperatives to be complied with in a non-binding fashion. - Wagner

"We must think of law as more than simply a 'roadblock' on the road to greater technological innovation" - David Grant and Lyria Bennet Moses

Wagner, B. (2018). Ethics as an Escape from Regulation: From ethics-washing to ethics-shopping? in M. Hildebrandt (Ed.), Being Profiling. Cogitas ergo sum. Amsterdam University Press.
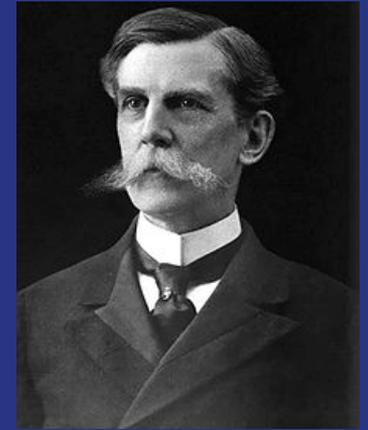
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Those who do not learn from History...

No provider or user of an interactive computer service shall be treated as the publisher or speaker of any information provided by another information content provider. - s.230 CDA

Member States shall not impose a general obligation on providers to monitor the information which they transmit or store, nor a general obligation actively to seek facts or circumstances indicating illegal activity. - A.15 ECD

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Bad Men and Bad Ethics

You can see very plainly that a bad man has as much reason as a good one for wishing to avoid an encounter with the public force, and therefore you can see the practical importance of the distinction between morality and law. A man who cares nothing for an ethical rule which is believed and practised by his neighbors is likely nevertheless to care a good deal to avoid being made to pay money, and will want to keep out of jail if he can - Oliver Wendell Holmes, Jr.
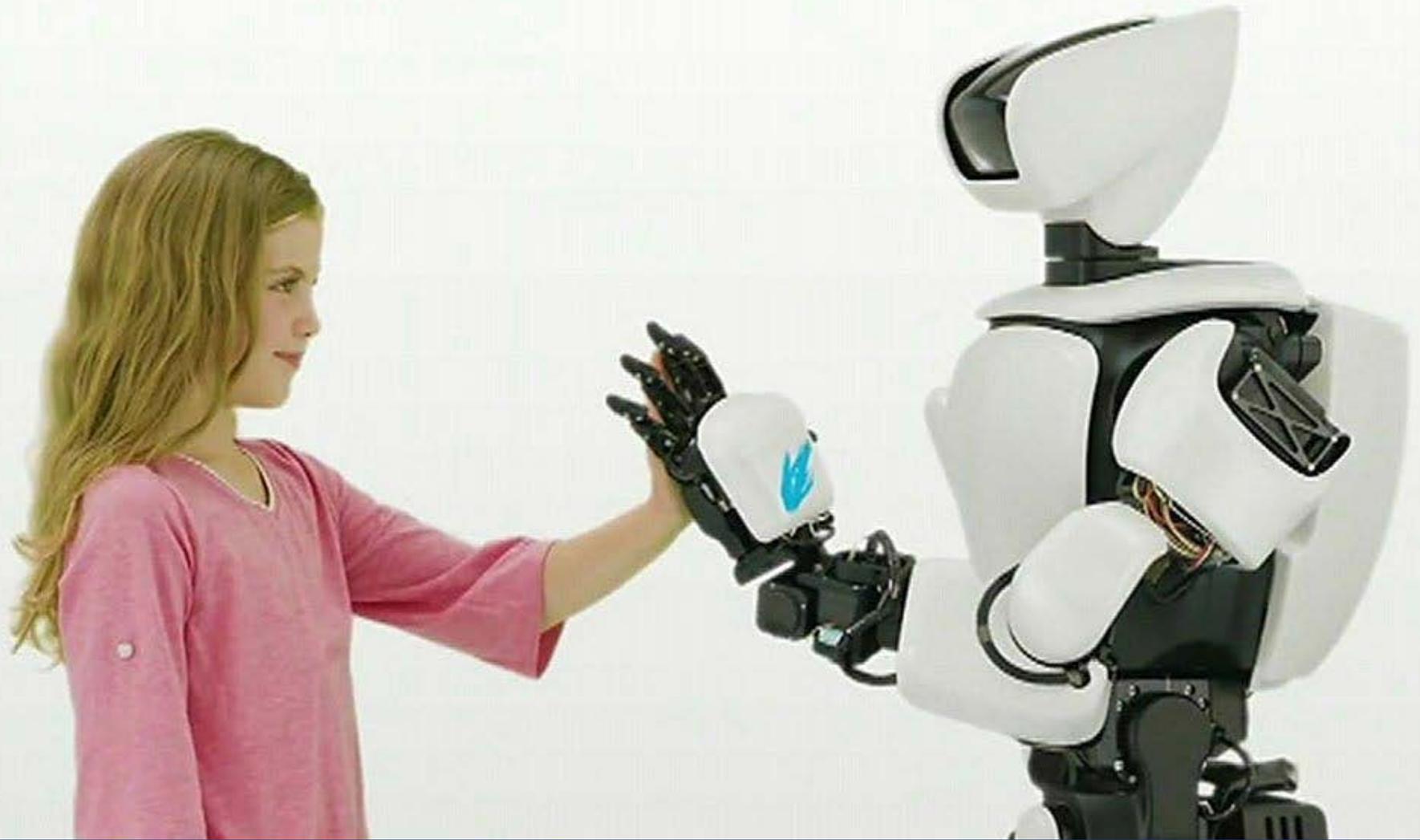
The Bad Man Principle

Ben Casey argues the field of machine ethics or machine morality is wrong-headed:

'compelling as this lofty vision of robotics engineering may appear at first blush, there is just one tiny detail standing in its way: the entire legal system. After all, liability for injury is governed not by moral codes, but by legal codes. Properly understood, the "practical importance of this distinction between morality and law" —to appropriate the canonical words of Justice Oliver Wendell Holmes—holds profoundly different implications for the role of ethics in robotics engineering.'

Casey, B. (2017). Amoral Machines, or: How Roboticists Can Learn to Stop Worrying and Love the Law 111 Northwestern University Law Review 231.

Remember Law is a Social Science…

The image reflected in law is us…