



Artificial Intelligence: who is liable for it?

Civil and criminal liability

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Artificial Intelligence, a definition

“Artificial intelligence is that activity devoted to making machines intelligent, and intelligence is that quality that enables an entity to function appropriately and with foresight in its environment”

Nils J. Nilsson, *The quest for Artificial Intelligence: a History of Ideas and Achievements* (Cambridge, UK: Cambridge University Press, 2010)

Artificial Intelligence, application fields

Large-scale
Machine
Learning



Deep Learning



Reinforcement
Learning



Robotics



Computer Vision



Neuromorphic
computing



Natural
Language
Processing



Collaborative
Systems



Crowdsourcing
and Human
Computation



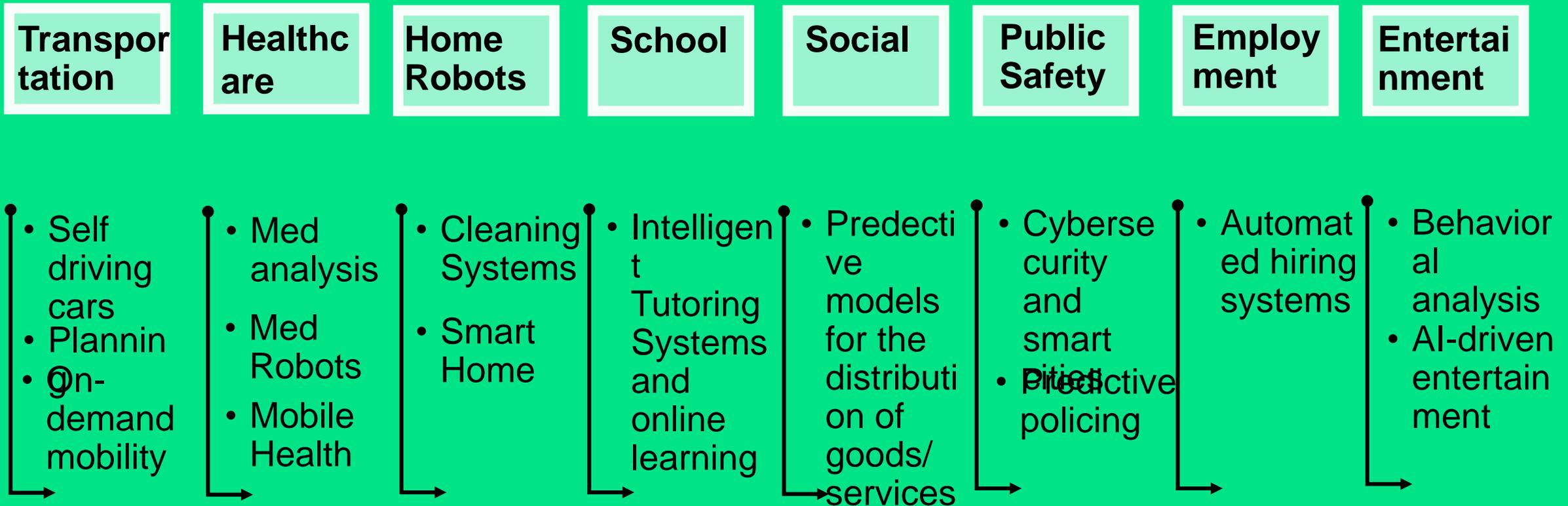
Algorithmic
game
theory/computat
ion social



Internet of
Things



Artificial Intelligence, application fields



Labor Law Issues - algorithmic management in the workplace

PAY ISSUES

Company XXX opened on June 2016 in London: food delivery through an app (initial salary for the riders: 20 £ /h);

Once increased the demand, the company changed the methods for the salary calculation (piece-rate work): 3.30 £ per delivery + 1 £ per mile + 5 £ of “travel expenses” – the commission fee (25%) due to the company;

Following an update of the app, the drivers saw their salaries further reduced;

August 2016: Union demonstration in front of the Company’s premises

DISCRIMINATION

COMPANY YYY advises 40 shop chains in the US;

The shops contain sensors measuring the number and type of customers visiting the shop;

Such data are matched with the sales made by each employee to calculate the “real productivity” of the employee;

Company YYY uses the weather forecasts, online traffic and several other data to predict the customers attendance;

On the basis of such data, the software organizes the employee’s hour and turn choosing the best combination of employees so to increase the sales.

The turns are shared by app / more productive employees are preferred.

WORK CONTRACT ISSUES

Company ZZZ is a food delivery company;

In certain London areas the company created a turning system for the employees, in other areas employees were free to choose the work schedule using the app (different pays between the 2 systems);

The app gives 30 seconds to the rider to accept the order giving only the collecting point but not the final destination (available only after the food collection);

The algorithm evaluates the riders on: acceptance time, arrival time at the restaurant, dwell time, orders in delay, orders not accepted

August 2016: drivers’ strike asking for an equal and fair treatment.

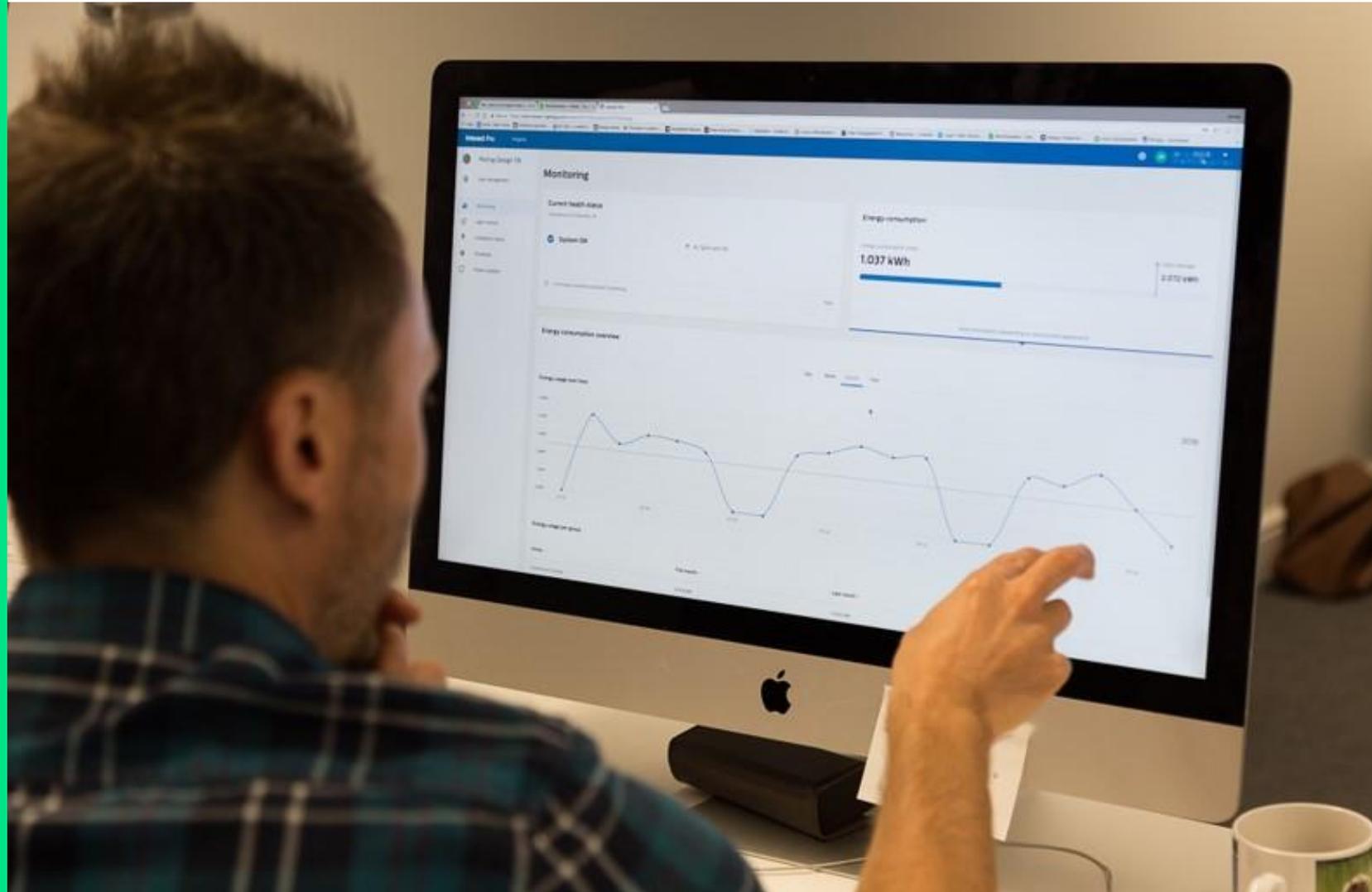
Another Labour Law Issue

- On July 20th 2016 the GMB Union sued Company XXX before the Central London Employment Tribunal;
- The Union claimed that the algorithm used by the Company exercised a kind of control over the workers such that the latter had to be considered as “employees” pursuant to the applicable laws:
 - the drivers chose when to work, once logged in they had 10-20 seconds to reply to the algorithm (no knowledge of the final destination of the end-customer);
 - if the driver lost 3 requests in a row, he/she was immediately disconnected from the app for 2 minutes;
 - the company sent a weekly report with the confirmation rate and the average score (which was up to 5) given by the customers;
- The Union claimed that the worker should have the right to (i) minimum wage; (ii) sick pay; (iii) paid holidays; and (iv) any other right given by the applicable laws;
- The company claimed that the drivers couldn’t be considered as employees of the Company because they didn’t have the obligation to connect with the app.

Redefinition of the concept of “employee/autonomous worker”

Non voluntary discriminations

- ❑ The algorithms are not used only for the management of the employees but also for their selection;
- ❑ Many companies claim that a software is more objective and efficient than “human” recruiters in the personnel selection;
- ❑ There are software packages which penalize disadvantaged workers;
- ❑ **Kyle Behm Case:** After a treatment (successfully completed) for a bipolar disorder, the hiring process was blocked due to the fact that he failed the “personality test”. The same issue happened in 6 different more occasions with 6 different companies. He filed complaints – some jointly with the Equal Employment Opportunity Commission – against all seven companies for violating the Americans with Disabilities Act.



Artificial Intelligence and Product Liability

Directive 85/374/EEC (adopted in 1985) provides that if a defective product causes any physical damage to consumers or their property, the producer has to provide compensation irrespectively of whether there is negligence or fault on their part.

The EU regime for this kind of liability is **“technology-neutral”** and has been applied during the years to technologies which were unavailable in the 80’s.

The Commission has set up an *“expert group on liability and new technologies”* : (i) the *‘product liability formation’* will assist the Commission in drawing up guidance on the Directive; and (ii) the *‘new technologies formation’* will assess the implications of emerging digital technologies for the wider liability frameworks at EU and national level.

In 2019 will be published : (i) a guidance on the Product Liability Directive; and (ii) a report on the broader implications for, potential gaps in and orientations for, the liability and safety frameworks for artificial intelligence, the Internet of Things and robotics.

The Member States signed on 2018 a *“Declaration on Cooperation on AI”* and in 2018 two working groups have been created: (i) the *“high level expert group (HLEG) on AI”*, a group of 52 experts from academia, civil society and industry, responsible to develop the ethic guidelines; and (ii), the *“EU AI Alliance”*, a platform aimed at including a broader group of stakeholders. **The ethic guidelines have been published on April 2019.**



Allocation of responsibility in Cybercrimes

- The development of Artificial Intelligence is inevitably influencing the creation of new malwares;
- A **ransomware** is a specific type of malware which limits the access to the infected device and requests the payment of a ransom to remove the restriction;
- The so-called “*AI-infused ransomware*” in the upcoming years will cause large damages also to extremely sophisticated targets (multinationals or governmental institutions);
- According to Dave Palmer’s opinion (CIO of DarkTrace) “*we will assist to the extortion of goods and data through such ransomwares...industrial equipment, medical equipment, any equipment needed for the business continuity*”.



Artificial Intelligence – Possible Legal Implications

Privacy

The prediction by the AI of future behaviors will raise relevant ethic questions (the so-called “Minority Report Effect”).

Labor Law

The workers replaced by the AI will strongly demand for a legislation aimed at protecting the “human workers”.

Civil Liability

Allocation: wide divergency between those who exclude the “human” liability for an AI action and those who accept such option

Tax Law

The AI will drastically reduce the human errors (especially in tax payment procedures). The States will be obliged to reorder their levy systems.

Criminal Liability

In several legal systems the “willfulness” principle in the check of criminal offences will raise interpretational issues

Agency

In the upcoming years we will need to answer to the question if an AI could act in the name and on behalf of a person or a company.

“One Hundred Year Study on Artificial Intelligence” – Stanford University



Increase the knowledge about the AI at all the governmental levels. An effective governance requires the contribution of experts who may understand the interaction between AI, policy objectives and ethic principles.



Remove the existing roadblocks for the research on security, data protection and analysis of the social effects deriving from the application of AI systems.



Increase the public and private funds aimed at financing the interdisciplinary research on the social impacts of the Artificial Intelligence.

Signify