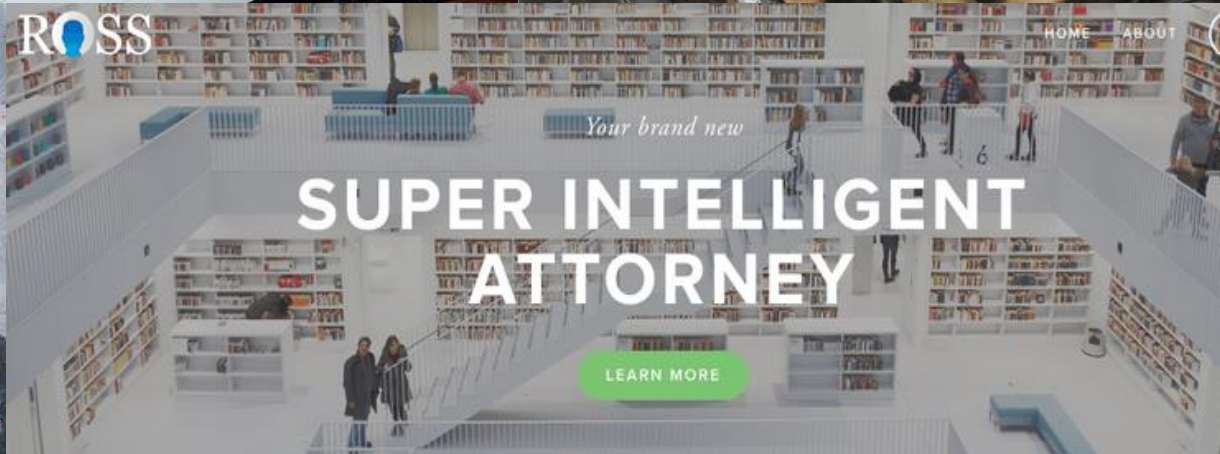


Context

The use of so-called artificial intelligence received renewed interest over the past years.....



Stakes

**Important changes in all fields of h
are expected**

In the judicial field, there is no objective scientific analysis of the solutions being developed and their compatibility with human rights



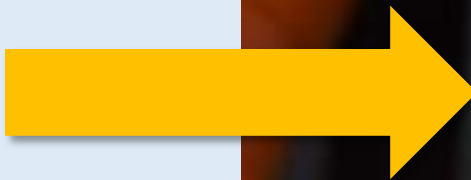
Questions

- 1. Does artificial intelligence really exist today? What is its fuel?**
- 2. What is predictive justice? What possible applications in the civil and criminal field? What opportunities, what risks? What possible applications to serve the interests of justice?**
- 3. What avenues for the governance of this phenomenon? Regulation, ethical framework?**

Definitions

Open Data (narrow sense)

Data (public or private) organised in a base, freely downloadable and re-employable under a no-cost operating license = **Free fuel**



Open Data (broad sense)

Treatment and analysis of open data through different techniques (statistics, probabilities, data mining, automatic learning).

**OPEN
DATA**



Definitions

Big Data (narrow sense) / massive data

Big set of data which can be subject to a computer process (open data or data employable with a not-for-free operating license, electronic messages, connection traces, GPS signals etc) = The whole fuel pump (with or without free fuel)

Big Data (broad sense) or Big Data Analytics

Advanced means of processing a large volume of data, a large variety with velocity (3V rule):

Statistics, probability or mathematics
Data mining
Automatic learning (machine learning), automatic natural language processing, etc



Case law in open data: fuel for AI applications

As part of a global movement calling for transparency and accountability of public action, growing tendency (including in Europe) to make available data coming from public institutions (including courts' decisions) in the form of **freely downloadable databases**



Case law in open data: fuel for AI applications

Case study: France

- 2016 law on the « digital Republic » → all court decisions at all instances to be disseminated in the form of open data, for free and **with respect for the privacy of the persons concerned**
- **This public availability is preceded by an analysis of the risk of reidentification of the persons concerned**



Case law in open data – points of attention

Open data: Access to data not to information

1/ Open data is about access to raw information in database format: this is access to data



Open data is compound of raw data that are not readable as such by all the citizens

Data must be processed to be presented and understandable

Direct recipients may be private companies, NGOs, journalists,... who have enough knowledge to process them

Case law in open data – points of attention

Open data: Access to data not to information

2/ Open data policies are not a new way to ensure directly an access to judicial decisions: **this is access to information**



SEARCH

Français | Advanced Search

ADVANCED SEARCH

Text

Conclusion

Resolution Number

Date dd/mm/yyyy to dd/mm/yyyy

Separate Opinion(s) Yes No

Domestic Law

International Law and

Other Relevant Material

Keywords

SEARCH

31052 Results Found

Print Export RSS Sort by: Relevance

CRITERIA CLEAR ALL Document Collection Id: Committee,Decisions,...

Case of Schweizerische Radio- und Fernsehgesellschaft SRG v. Switzerland
34124/06 | Available only in French | Judgment (Merits and Just Satisfaction) | Court (Fifth Section) | 21/06/2012
Violation of Article 10 - Freedom of expression - (General) (Article 10-1 - Freedom of expression)
Case Details Related

Case of Kulish v. Ukraine
35093/07 | Judgment (Merits and Just Satisfaction) | Court (Fifth Section) | 21/06/2012
Preliminary objections dismissed (Article 35-1 - Exhaustion of domestic remedies) No violation of Article 3 - Prohibition of ... more...
Case Details Translation Related

Access to decision is already ensured by search engines in almost all Council of Europe member States (89%)

Case law in open data – points of attention

Open data: Access to data not to information

3/ Open data policies are not linked to mandatory information in court decisions having their own purposes: **this is access to information**

DEBATS A L'AUDIENCE PUBLIQUE DU 15 JUIN 2016

COMPOSITION DU TRIBUNAL :

Madame Elisabeth VERNET, Président,
Madame Christine VALOIS, Assesseur représentant les travailleurs salariés,
Madame Catherine DURGEAT, Assesseur représentant les travailleurs non-salariés,
Madame Céline BENS, Secrétaire lors des débats et du prononcé.

DECISION CONTRADICTOIRE et EN DERNIER RESSORT

rendue après délibéré à l'audience publique du 08 SEPTEMBRE 2016 prononcée par le Président, lequel a signé la minute avec le Secrétaire.

On Petition for Review of a Final Order of the
Occupational Safety & Health Review Commission

Before: GARLAND, *Chief Judge*, and ROGERS and KAVANAUGH, *Circuit Judges*

J U D G M E N T

This cause came on to be heard on the petition for review of a Final Order of the Occupational Safety & Health Review Commission and was argued by counsel. On consideration thereof, it is

ORDERED and **ADJUDGED** that the petition for review is denied, in accordance with the opinion of the court filed herein this date.

Name of the judge, court clerks, parties must be written in court decisions

Open data does not guarantee as such this transparency goal: on the contrary, it can lead to possible misuses (profiling, forum shopping,...)

Case law in open data – points of attention

French exemple: a fully effective automated and anonymous mechanism to prevent a risk of identification and re-identification of the parties and witnesses not yet in place

- **Data protection concerns:** names, addresses, sensitive data included in judicial decisions
 - this is pseudonymisation and not anonymisation
 - data protection regime applies
- **Careful about the possible use which can be done of these data by third parties**

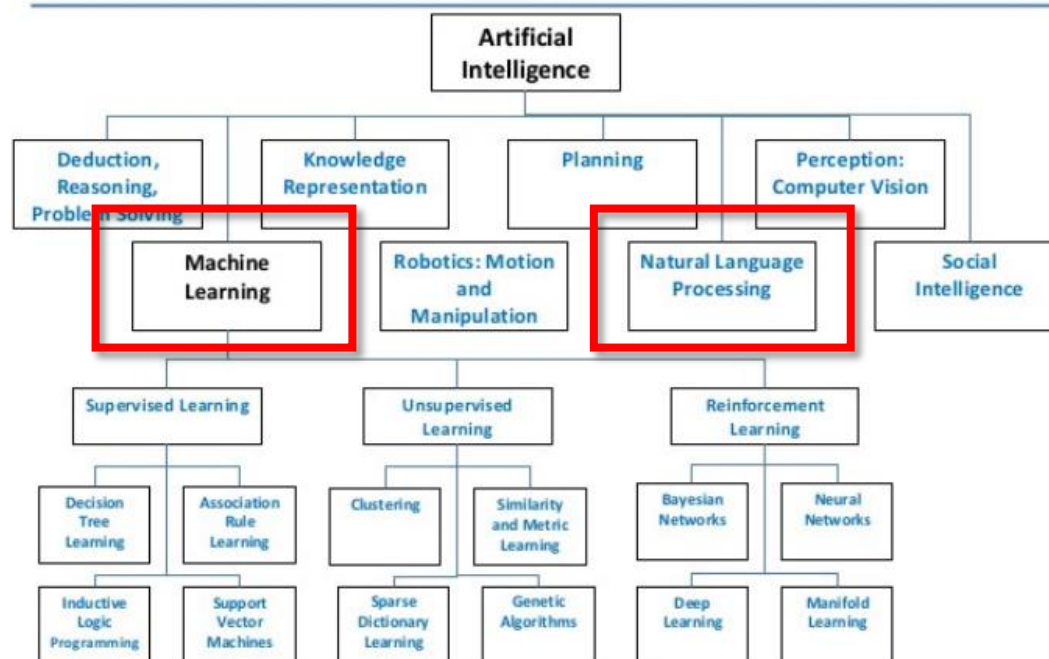


Definitions

Data = Fuel / Artificial Intelligence (AI) = engine

The term AI is contested by specialists because **AI as such does not exist**: they prefer to use the exact name of the **technologies** actually used. Two are particularly used for the processing of judicial decisions.

Artificial Intelligence / Machine Learning Classification



Definitions

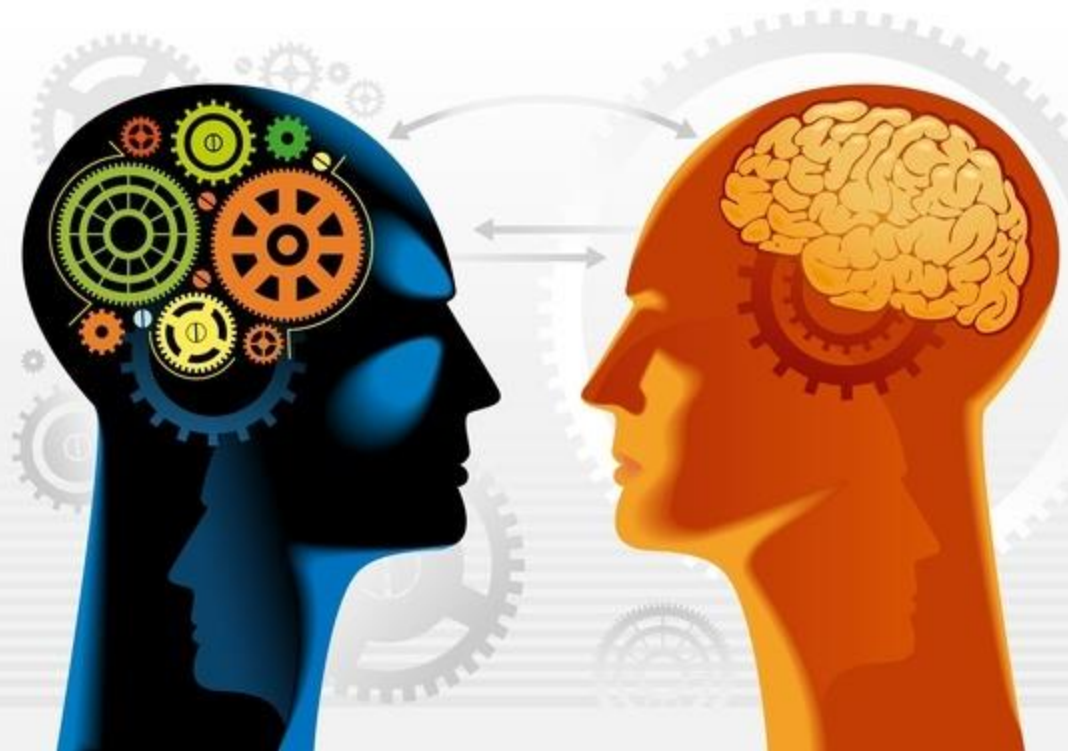
Artificial intelligence (AI) : two technologies used in particular for processing case law

Natural Language

Processing: IT processing of human language

Machine Learning

Algorithm of automatic learning (supervised or not by a human) aiming to create links among different data (correlations, categorisation)



Definitions

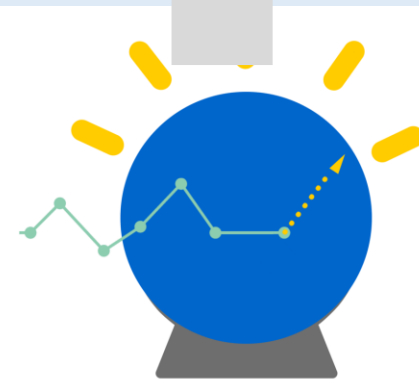
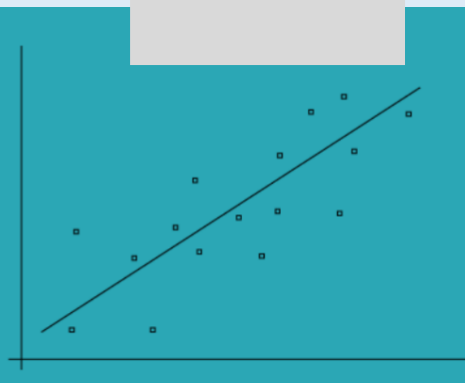
Artificial intelligence (AI) : in general, from data collection to prediction

1
Data
collection

2
Analysis
NLP
Machine
Learning etc

3
Advisory

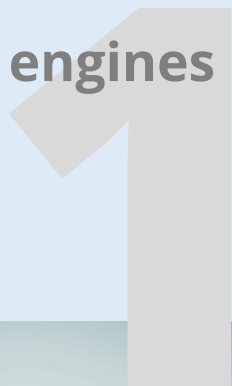
4
Predicting?



Definitions

Artificial intelligence (AI) : possible use with case law

Search engines



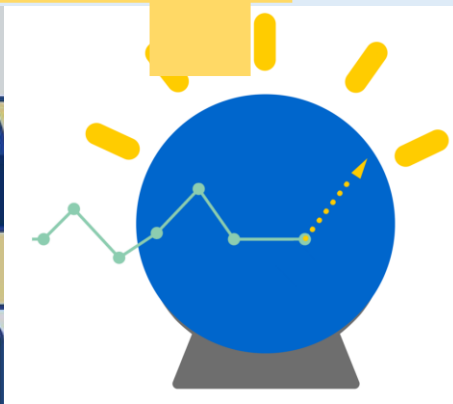
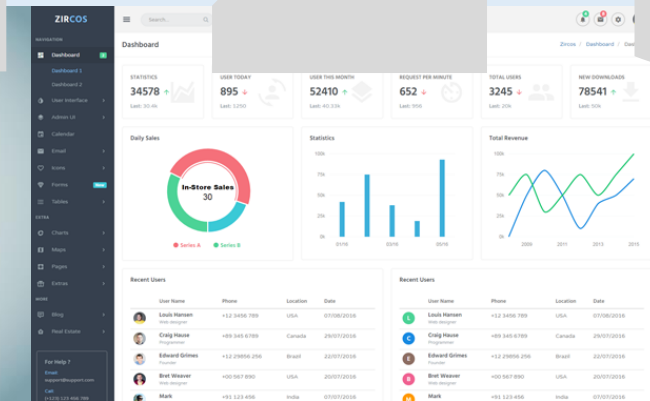
Administration
of justice



Chatbot



Predictive
justice



Definitions

A « predictive » justice?

Predictive : Word coming from hard sciences, which describes methods allowing to anticipate a situation

Prae (before) / *Dictare* (say) : Say before something happens

Prae (before) / *Visere* (see) : See before something happens, based on visible findings (empirical and measurables)

In a narrow sense, building anticipation tools relates more to forecasting than predicting



Study

Study of the University College of London based on 584 decisions of the ECtHR:

79% of decisions anticipated

AI predicts outcomes of human rights trials

24 October 2016

The judicial decisions of the European Court of Human Rights (ECtHR) have been predicted to 79% accuracy using an artificial intelligence (AI) method developed by researchers at UCL, the University of Sheffield and the University of Pennsylvania.



The method is the first to predict the outcomes of a major international court by automatically analysing case text using a machine learning algorithm. The study behind it was published today in *PeerJ Computer Science*.

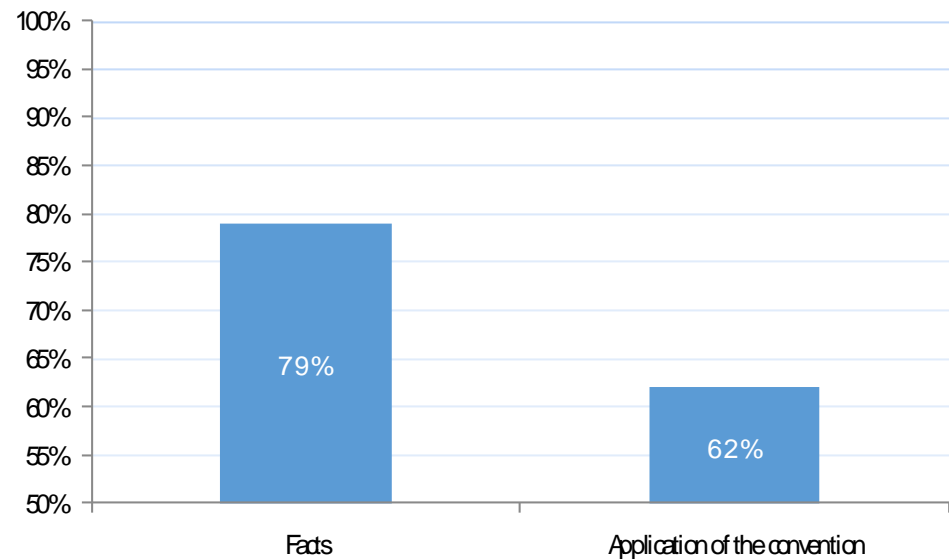
Study

A machine that operates a probabilistic treatment of lexical groups

The joint processing of automatic natural language processing and automatic learning enabled the machine to identify lexical groups and classify them according to their frequency in violation or non-violation decisions

A machine that gets better prediction results on the "facts" part

The success rate of replication of the result is 79% on the "facts" part and drops to 62% on the application part of the Convention



Study

In practical terms: Weighting of group of words

Positive State Obligations +13,50

Treatment by state officials + 10,20

Detention conditions +11,70

Enforcement of domestic judgments and
reasonable time +11,70



VIOLATION



NON VIOLATION



Issues of proof -15,20

Sentencing -17,40

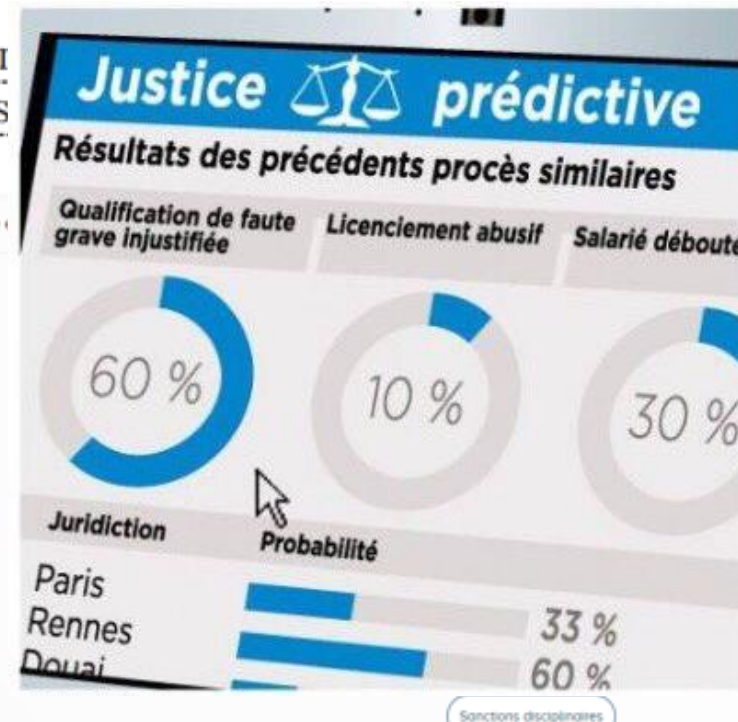
Prior violation of article 2 -11,40

Property rights and claims by companies -9,08

Application

« Predictive » justice?

Software anticipating a judicial decisions based on the analysis of a large quantity of case law



Findings

A machine that does not reproduce legal reasoning

It is a statistical or probabilistic approach, without understanding of legal reasoning

A machine that does not explain the meaning of the law or the behaviour of judges

Impossibility of mechanically identifying all the causative factors of a decision and risks of confusing correlation and causality

Findings

A court decision: an imperfect raw material for computers

What is a justice decision ?

- Selection of relevant facts by the judge in a raw account
- Application of standards that are rational but do not fit together in a perfectly coherent manner ("open texture of law")
- Formalization of reasoning in the form of a syllogism, which is more of an *a posteriori* narrative that does not strictly isolate all the causative factors of a decision (sometimes summary motivation)



Tests

Tests of several months in 2 appeal courts in France (Douai and Rennes)

Judges concluded for the absence of « added value » for their activity

RAYONNEZ DE BONHEUR!



LANCÔME
PARIS

JE ME L'OFFRE

La justice prédictive : de la révolution à la désillusion

Publié le vendredi 13 octobre 2017 à 6h00 par [Charlotte Piret](#) @ChPiret, [Hajera Mohammad](#)



Plusieurs tribunaux testent depuis quelques mois, un logiciel qui pourrait permettre à l'avenir de prédire une décision judiciaire. Mais les premiers retours sont mitigés.



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LA

RAY

Points of attention: civil, administrative, commercial matters

Will the statistical average of decisions become a norm? Which place for the law provision that a judge is supposed to apply ?

Transformation of construction of case law: « horizontal » « flat », « cristallised » around the amounts determined by scales ?

« Performative » effect and indirect effects over judges' impartiality



AI possible applications

Civil / commercial / administrative matters



Valorisation of case law

Research engines making links among doctrine, case law, laws and regulations

Compensation scales, support to on-line dispute resolution

Provided that data are of good quality, that certified and loyal algorithms are used and that access to a judge is always possible, for an adversarial debate

AI applications: criminal field



Strengthened abilities to prevent and fight crime

- Predictive policing (detecting fraudes for instance)
- Hot spots/predictive criminal mapping (spots where crime is likely to happen)

AI applications: criminal field

Predicting reoffending based on algorithms

- Before sentencing:
determining whether or
not to deprive an
individual of liberty
(HART in U.K.)
- In the sentencing stage
(COMPAS in the USA)



Sample of COMPAS questionnaire

Criminal Attitudes

The next statements are about your feelings and beliefs about various things. Again, there are no 'right or wrong' answers. Just indicate how much you agree or disagree with each statement.

127. "A hungry person has a right to steal."
 Strongly Disagree Disagree Not Sure Agree Strongly Agree
128. "When people get into trouble with the law it's because they have no chance to get a decent job."
 Strongly Disagree Disagree Not Sure Agree Strongly Agree
129. "When people do minor offenses or use drugs they don't hurt anyone except themselves."
 Strongly Disagree Disagree Not Sure Agree Strongly Agree
130. "If someone insults my friends, family or group they are asking for trouble."
 Strongly Disagree Disagree Not Sure Agree Strongly Agree
131. "When things are stolen from rich people they won't miss the stuff because insurance will cover the loss."
 Strongly Disagree Disagree Not Sure Agree Strongly Agree
132. "I have felt very angry at someone or at something."
 Strongly Disagree Disagree Not Sure Agree Strongly Agree
133. "Some people must be treated roughly or beaten up just to send them a clear message."
 Strongly Disagree Disagree Not Sure Agree Strongly Agree
134. "I won't hesitate to hit or threaten people if they have done something to hurt my friends
 Strongly Disagree Disagree Not Sure Agree Strongly Agree
135. "The law doesn't help average people."
 Strongly Disagree Disagree Not Sure Agree Strongly Agree
136. "Many people get into trouble or use drugs because society has given them no education,
 Strongly Disagree Disagree Not Sure Agree Strongly Agree
137. "Some people just don't deserve any respect and should be treated like animals."
 Strongly Disagree Disagree Not Sure Agree Strongly Agree

Points of attention: criminal field



Risk of discriminations and mistakes

Transparency of the algorithm and equality of arms in a criminal trial

Which place, which effects of algorithms on judicial decision-making?

Possible applications....



Study whether big data can facilitate the collection of objective information on an individual's life path, processed by a professional (judge, probation officer)

Points of attention: criminal field



Compatibility of algorithms with data protection principles

- Precautionary principle and preventive policies to be applied to minimise potential risks associated with the use of data by the algorithms → prior risk assessment: from the design stage (by design) and by default
- Processing of personal data should be done in line with established principles
- Rights of the persons concerned are of key importance:
 - ✓ Right not to be subject to an automated decision without his/her viewpoint being taken into account
 - ✓ Right to have access to and to object to elements of data processing
 - ✓ Right to a legal remedy

Cyberethics in processing judicial decisions

Processing of judicial decisions should be driven by clear goals and in line with ECHR requirements

The methodology behind should be transparent and non-biased, and certified by an independent authority

Cyberethics as a clear framework for guiding operators and strengthening responsibility



HIPPOCRATIC OATH



SWEAR by Apollo the physician and Asclepius and Hygieia and Panacea, invoking all the gods and goddesses to be my witnesses, that I will fulfil this Oath and this written covenant to the best of my powers and of my judgment. I will look upon him who shall have taught me this art even as on mine own parents; I will share with him my substance, and supply his necessities if he be in need; I will regard his offspring even as my own brethren, and will teach them this art, if they desire to learn it, without fee or covenant.

I WILL IMPART it by precept, by lecture and by all other manner of teaching, not only to my own sons but also to the sons of him who has taught me, and to disciples bound by covenant and oath according to the law of the physicians but to none other.

THE REGIMEN I adopt shall be for the benefit of the patients to the best of my power and judgment, not for their injury or for any wrongful purpose. I will not give a deadly drug to any one, though it be asked of me, nor will I lead the way in such counsel; and likewise I will not give a woman a pessary to procure abortion. But I will keep my life and my art in purity and holiness. I will not use the knife, not even, verily, on sufferers from stone, but I will give place to such as are craftsmen therein.

WHATSOEVER HOUSE I enter, I will enter for the benefit of the sick, refraining from all voluntary wrongdoing and corruption, especially seduction of male or female, bond or free.

Towards AI ethics?

First European Charter of the use of AI in judicial systems

1st part: A Charter

Short document setting forth fundamental principles which should be guaranteed by any system of case law processing and analysis

2nd part: A glossary

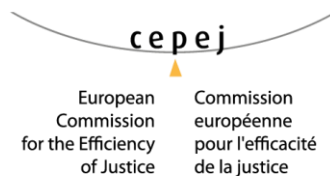
Definition of the technology words to ensure easy understanding by non-specialists

3rd part: a scientific study

Carried out by 3 experts (1 judge, 1 IT expert, 1 expert on CoE Convention n° 108 to highlight data protection concerns) – lays the foundations of the Charter's recommendations

Thank you !

Questions / Discussion



<http://www.coe.int/cepej>



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