Business Use

Computer Forensics and cyber crime analysis

Introduction to the Course

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Business Use

Overview of the Course

1. Introduction to the Course
2. Foundations of Digital Forensics
3. Cybercrime Convention
4. Resolution Adopted by the UN General Assembly on 26 May 2021
5. Garlasco case
6. IoT and Digital Forensics
7. Digital Forensics and Territorial Principle
8. Remote Forensics: Hacking Team Case
9. Digital Forensics and Artificial Intelligence
10. The New Frontier of Digital Forensics in the AI Context
11. Case studies and practical applications

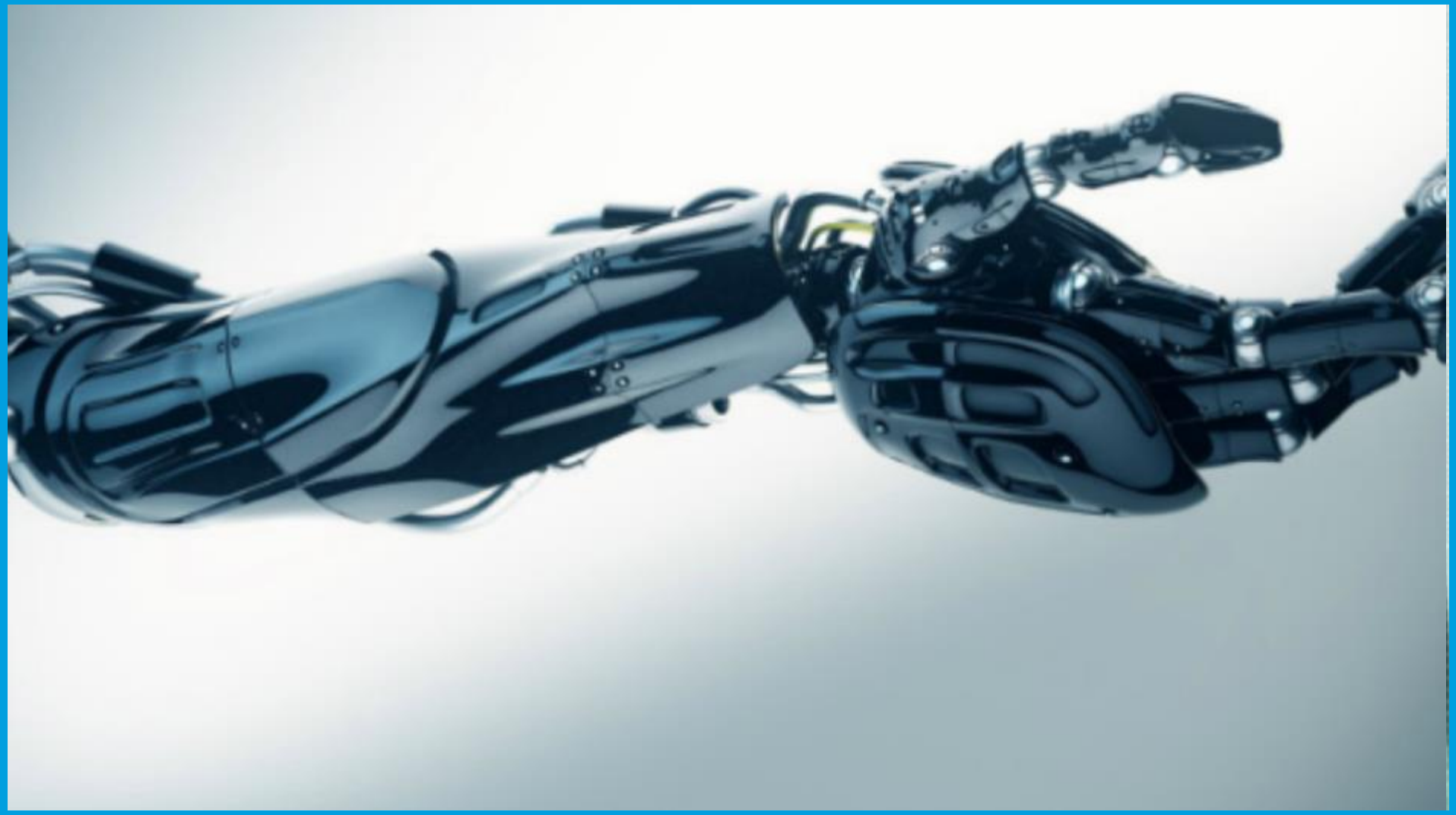
WHO I AM?

Where We Are

*Technology **Between** Us*

*Technology **About** Us*

*Technology **In** Us*



A math exercise

Three plus Four,
Multiplied per Two

3+4X2=

14

11

If the difference between 14 and 11 is important, then the natural language is not the best way to solve legal problem.

A coding exercise

Coding with Python

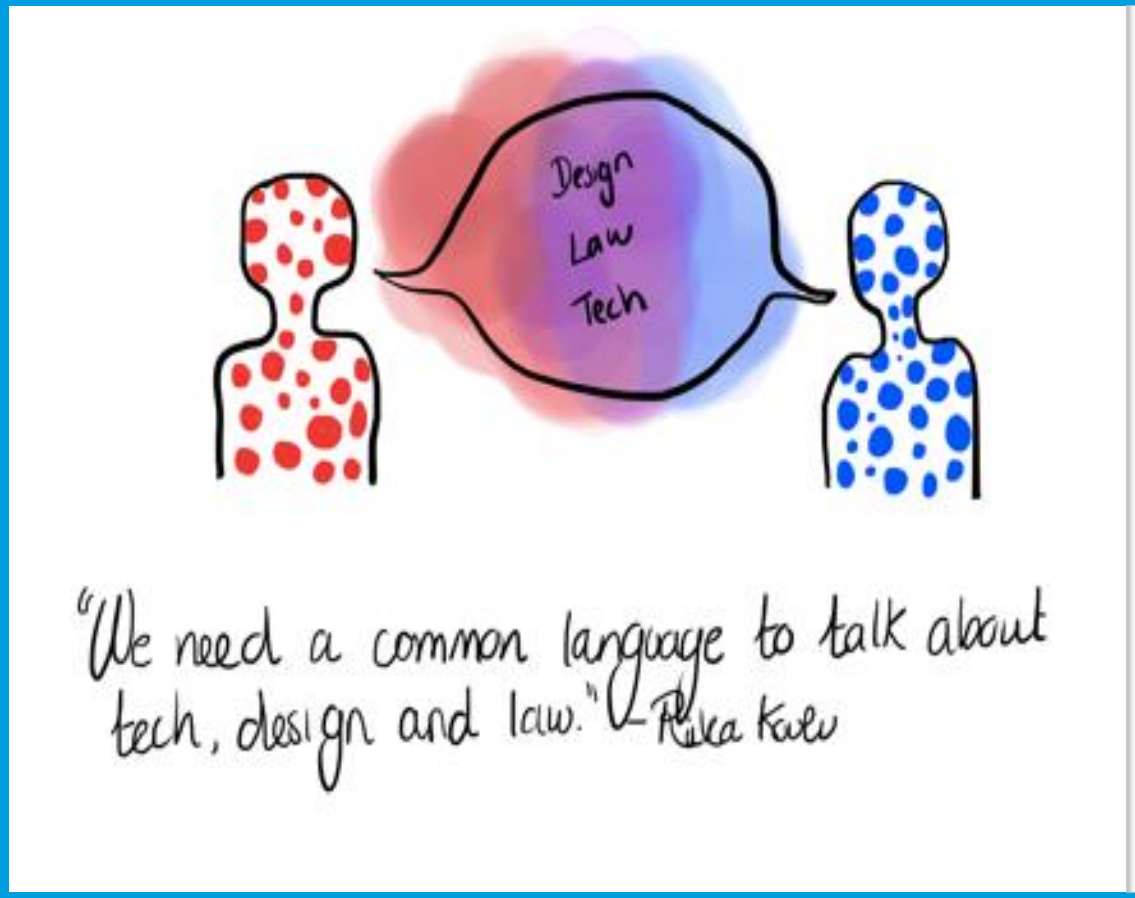
1. Create Container
2. Create Value
3. Create Variables
4. Create function

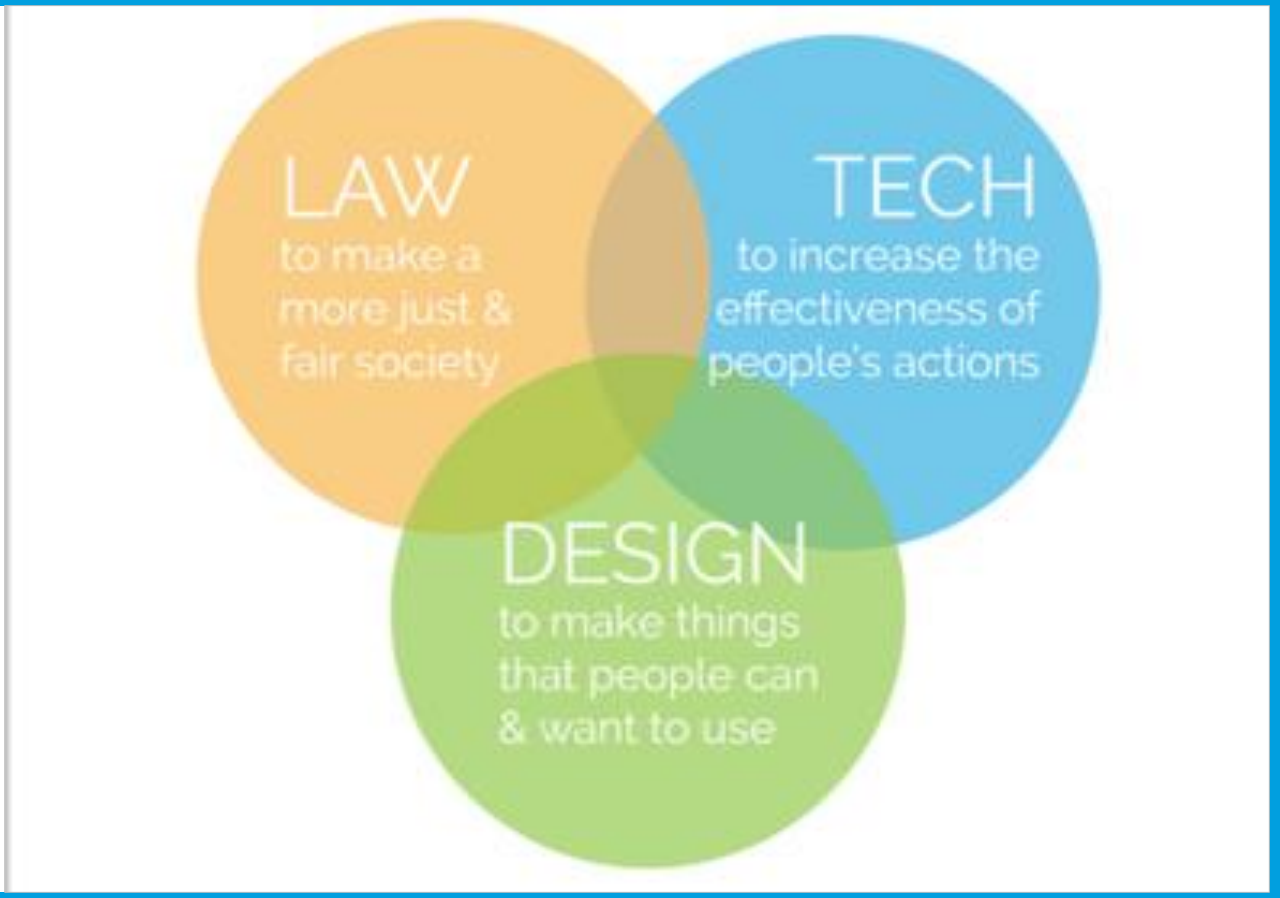
Suggestion no.1

We don't have to reinvent the wheel

Legal Design

What is Legal Design?





® Margaret Hagan

Methodology of Legal Design

Problem 1

Information overload

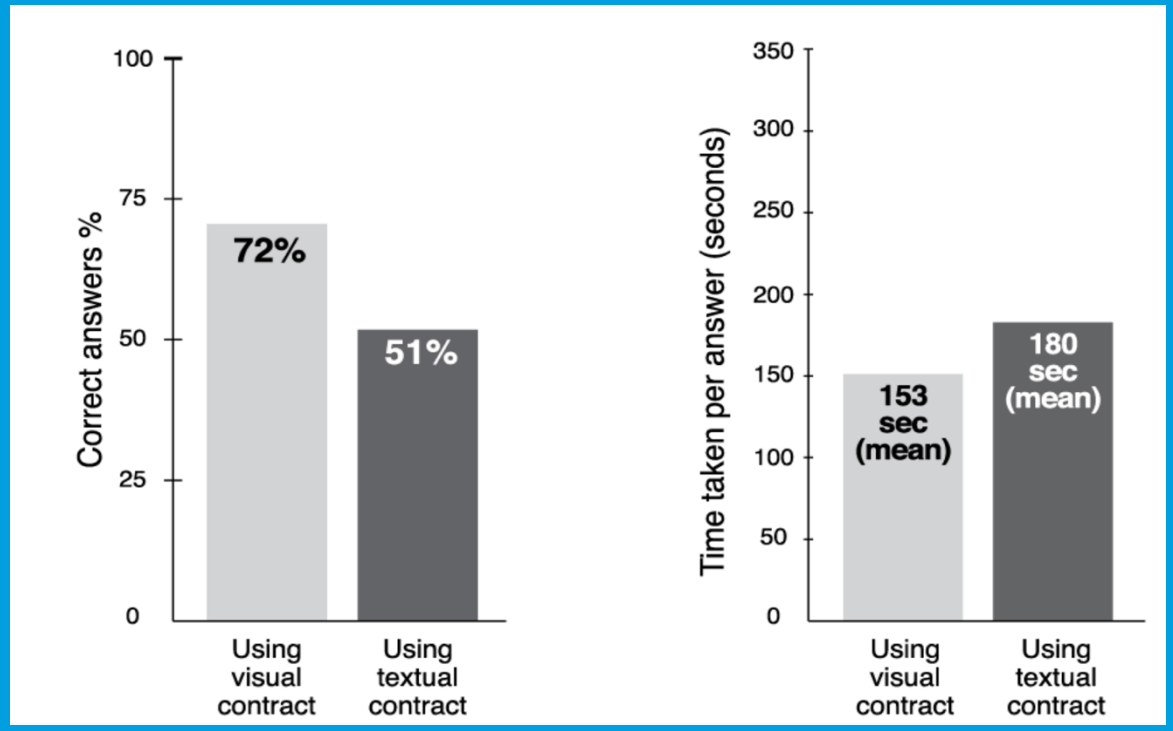
- *Discover the status quo*
- *Focus on a person*
- *Make sense and prioritize*
- *Protype*
- *Testing*

Problem 2

Written by lawyers for lawyers

- *Empathy*
- *Awareness of Unconscious Bias*
- *Respect for Community*
- *Trasparency About Intentions*
- *Commitment and Follow-Through*

Legal Design Example

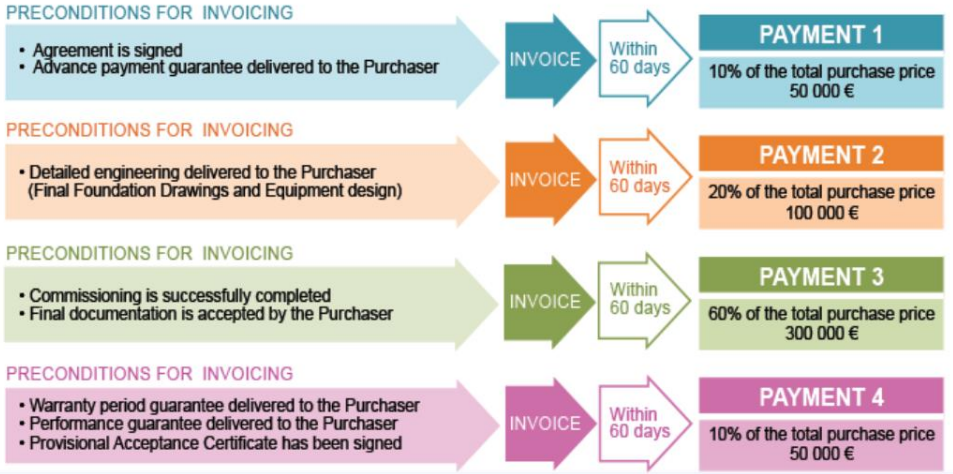


1) **10 % of the Purchase Price, fifty thousand (50 000)** euro as an advance payment when this Agreement has been signed, provided that the advance payment guarantee (as described in clause 6 "Guarantees") have been delivered to the Purchaser;

2) **20 % of the Purchase Price, hundred thousand (100 000) euro** when complete detail engineering documentation by the Supplier have been delivered and approved by the Purchaser,

3) **60 % of the Purchase Price, three hundred thousand (300 000) euro** when the commissioning of the Equipment and final documentation concerning the Equipment has been completed and accepted by the Purchaser;

4) **10 % of the Purchase Price, fifty thousand (50 000) euro** when the warranty period guarantee and performance guarantee have been delivered to the Purchaser, and the Provisional Acceptance Certificate has been signed according to clause 13 "Provisional Acceptance".

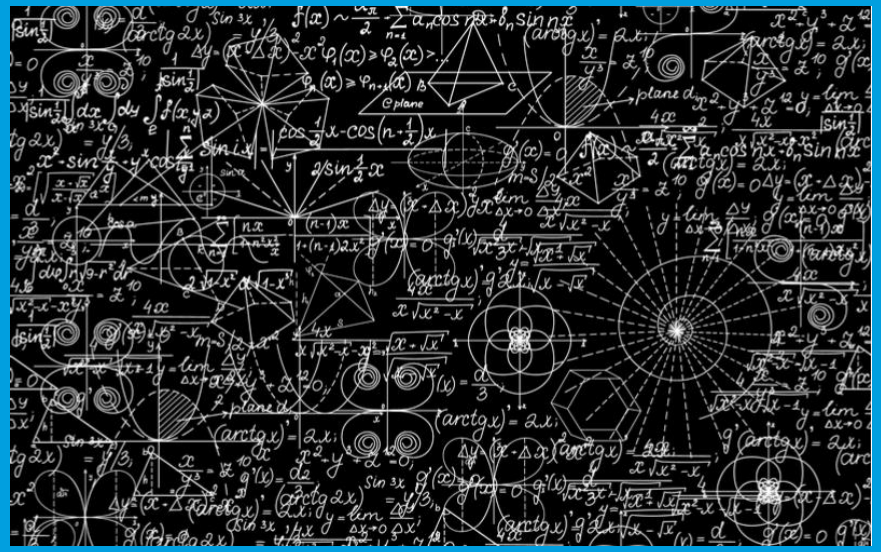


Dark Patterns

A dark pattern is "a user interface that has been carefully crafted to trick users into doing things, such as buying insurance with their purchase or signing up for recurring bills (Harry Brignull)

Suggestion no.2

We must never be too complicated.



if we want to be, we would be perfect for working in Amazon Legal Department

GDPR and Algorithm Bias

Art. 22 of GDPR

1. The data subject shall have the right not to be subject to a decision **based solely on automated processing**, **including profiling**, which produces legal effects concerning him or her or similarly significantly affects him or her.

2. Paragraph 1 shall not apply if the decision:

(a) is necessary for entering into, or performance of, a contract between the data subject and a data controller;

(b) is authorised by Union or Member State law to which the controller is subject and which also lays down suitable measures to safeguard the data subject's rights and freedoms and legitimate interests; or

(c) is based on the data subject's explicit consent.

Practical Examples

Lex Machina

Legal tasks that are being automated are largely those that used to be performed by new law school graduates and paralegals. The use of AI in areas such as contract review and management is making contracting faster and easier and lets lawyers eliminate time-consuming and repetitive tasks from their daily routines. With Prediction and litigation technology you can enter a judge's name to predict the outcome of any judgement.

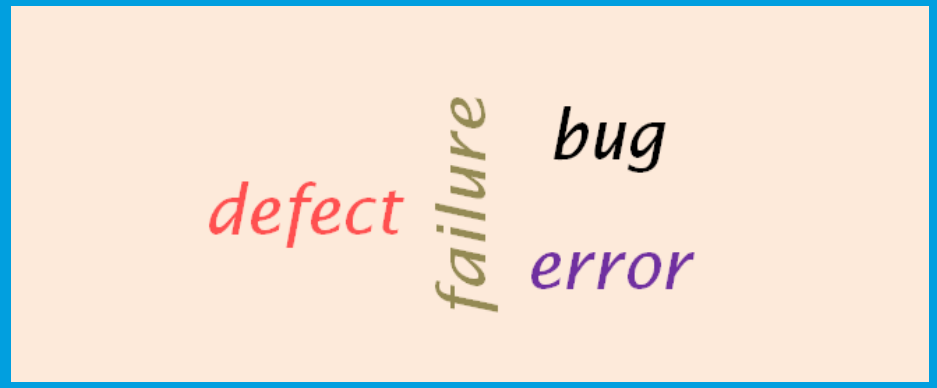
Practical Examples

Compas

COMPAS system (Correctional Offender Management Profiling for Alternative Sanctions). Nationwide, many jurisdictions use statistical algorithms to assess the likelihood a defendant will fail to appear at trial or commit a future violent crime. Propublica analysis found that white defendants who re-offended within the next two years were mistakenly labeled low risk almost twice as often as black re-offenders (48 percent vs. 28 percent).

Suggestion no.3

Let's remember that a false positive in digital forensics can change people's lives.



Challenges: Questions?

- How can consent be managed within AI?
- Right of explanation: is it possible to find profiling details within AI algorithms?
- How can biases be found within AI algorithms, and can it be stopped?
- How do you involve humans within AI when the very nature of AI is for machines to act and decide on their own?
- Is it possible to control and to regulate the fairness and the transparency of the algorithm? and if yes, how?
- St. George Hospital developed an algorithm to sort medical school applicants. The algorithm was trained to mimic past admissions decisions made by humans . But past decisions were biased against women and minorities. How to manage the false positive?
- Collective intelligence is enough to avoid false positive?
- Are Law enforcement and Judiciary system able to use these tools?

Business Use

Last Question: Technology substitute Us ?

Robots Will Help Lawyers, Much Like Autopilot Helps Pilots

During the 1940s many pilots were afraid that they'd lose their jobs due to the rise of autopilot technology. That didn't happen though, as even 80 years later we still have pilots operating the airplanes even while autopilot helps them immensely

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