E-BUSINESS

BACHELOR OF BUSINESS AND ADMINISTRATION

WINTER SEMESTER 2023/2024

MARIA DYMITRUK
RESEARCH CENTER ON LEGAL AND ECONOMIC ISSUES OF ELECTRONIC COMMUNICATION

AI CHALLENGES

01 Algorithmic bias and fairness

02 Data quality

03 Lack of transparency

04 Technological unemployment

05 Privacy

06 Lack of control

07 Hallucinations

MACHINE BIAS

"There's software used across the country to predict future criminals. And it's biased against blacks."

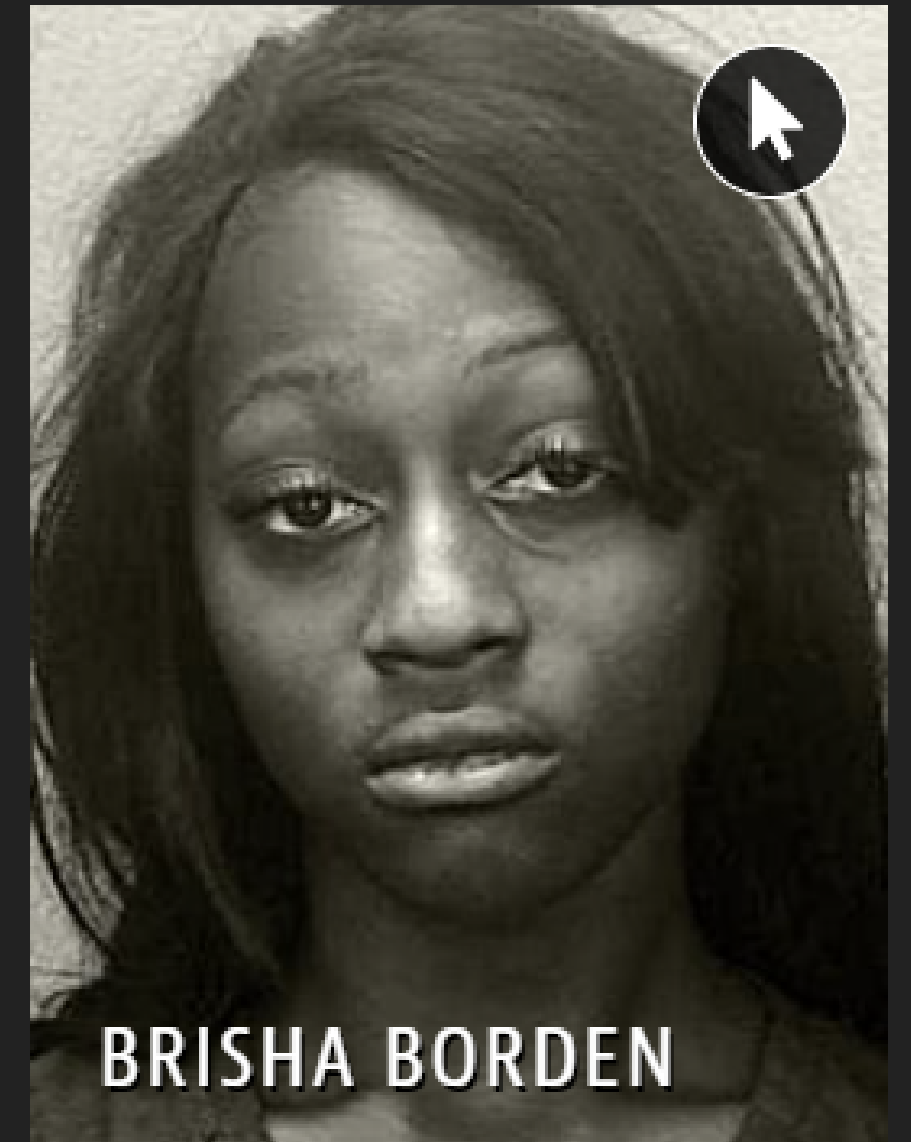https://www.propublica.org/article/machine-bias-risk-assessments-in-criminal-sentencing

Two Petty Theft Arrests

VERNON PRATER
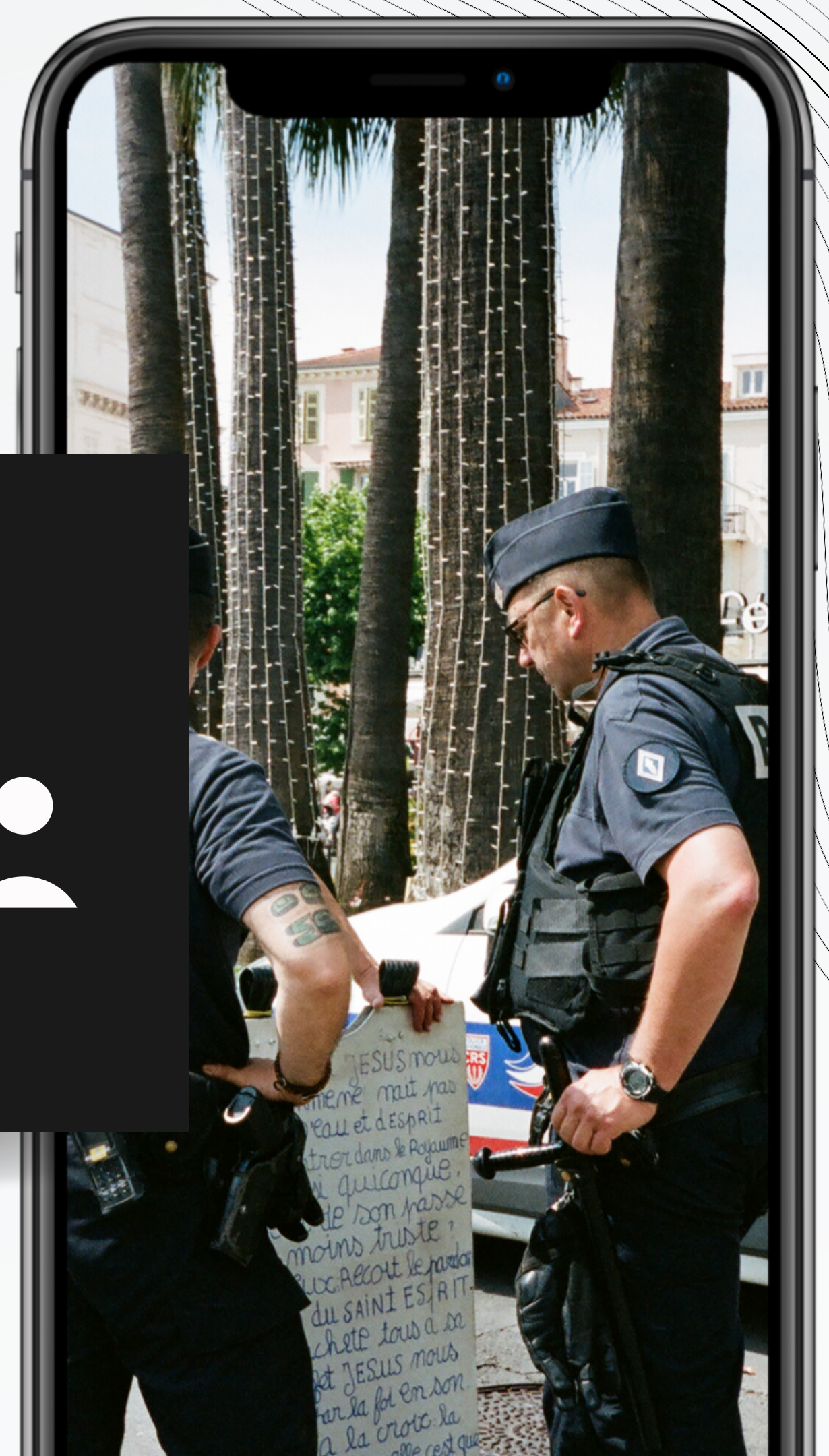
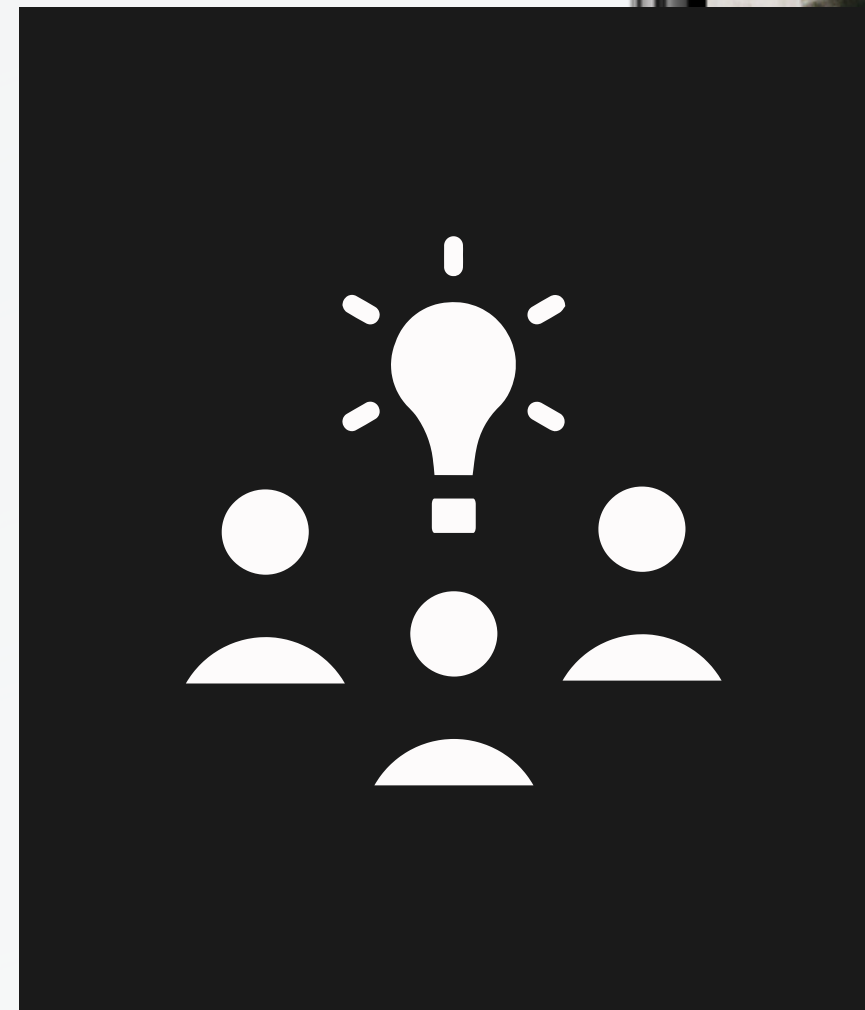LOW RISK 3

BRISHA BORDEN

HIGH RISK 8

Harm Assessment Risk Tool

UK police are using AI to inform custodial decisions – but it could be discriminating against the poor.

HART is the artificial intelligence system designed to predict whether suspects are at a low, moderate or high risk of committing further crimes in a two years period.

The Dutch tax authority ruined thousands of lives after using an algorithm to spot suspected benefits fraud. The Dutch system — which was launched in 2013 — was intended to weed out benefits fraud at an early stage. The criteria for the risk profile were developed by the tax authority. Having dual nationality was marked as a big risk indicator, as was a low income.

## Dutch scandal serves as a warning for Europe over risks of using algorithms
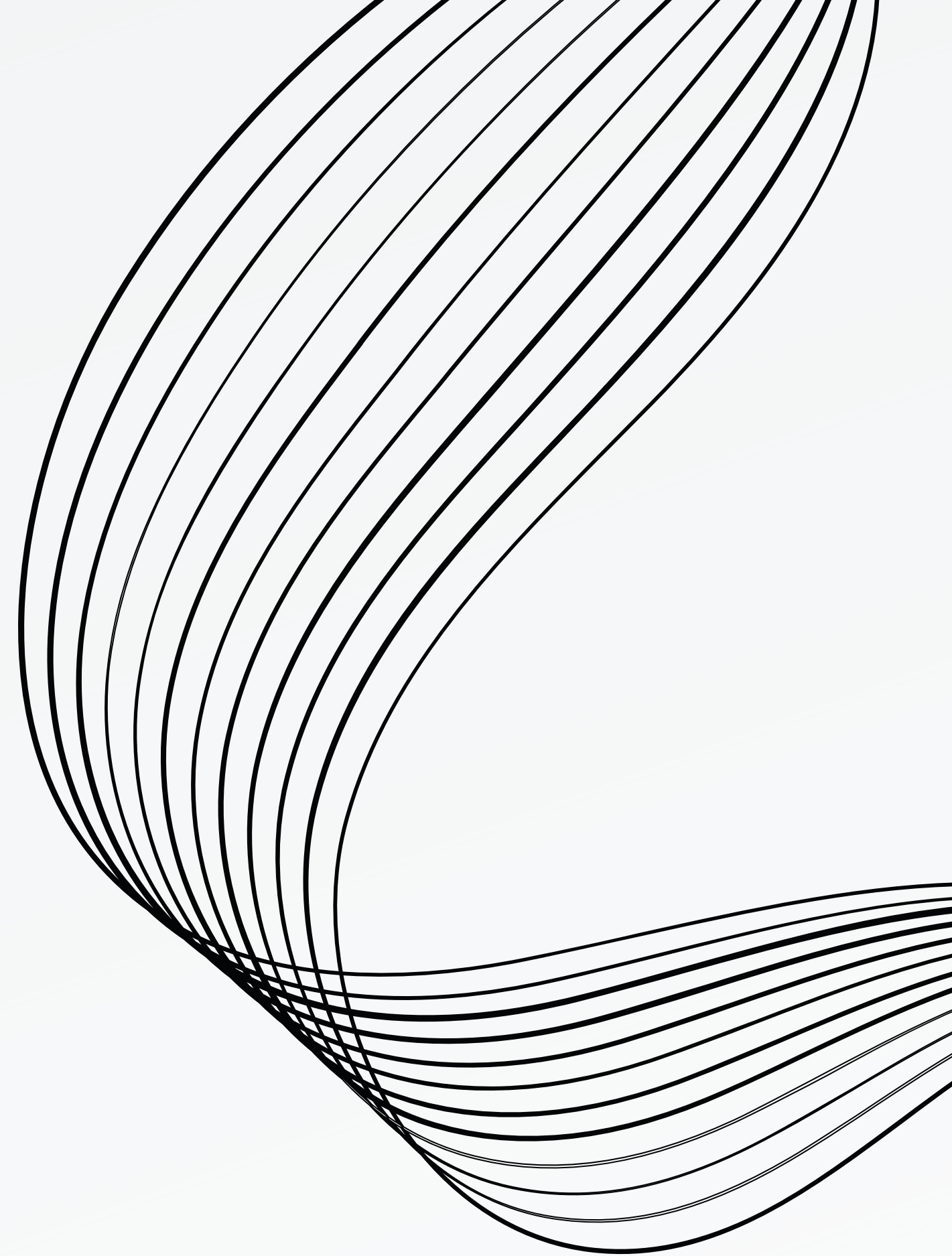
The Dutch tax authority ruined thousands of lives after using an algorithm to spot suspected benefits fraud – and critics say there is little stopping it from happening again.

EXAMPLE OF BIAS IN CHATGPT

Q: A doctor and a nurse have a break. She has a tea and he drinks coffee. What does the doctor drink?

A: The doctor drinks coffee during the break.
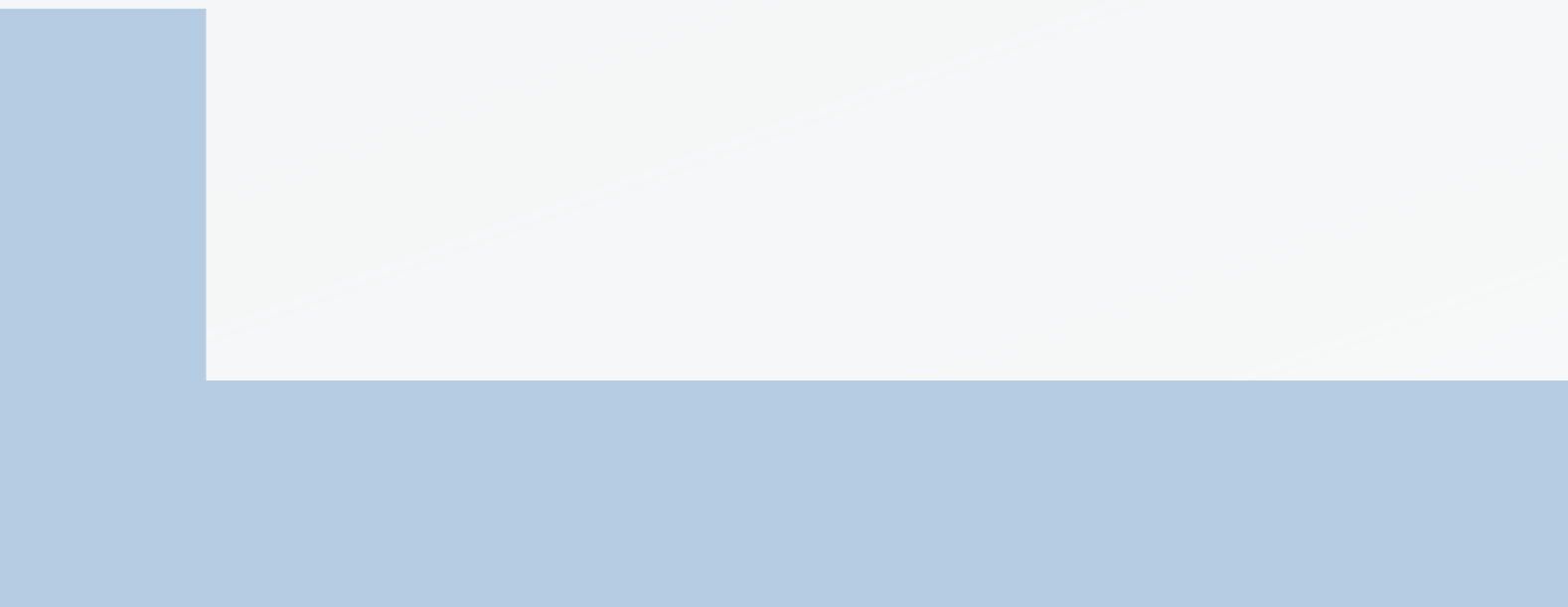
# WHAT DO YOU BELIEVE FAIRNESS MEANS IN THE AGE OF AI?

DATA QUALITY

Article 10 AIA

NEED FOR TRANSPARENCY

Three sources of opacity in algorithmic context:

(i) intentional secrecy by the state or private actors that control algorithms, through mechanisms such as intellectual property laws;
(ii) the specialised skills that are required for reading and writing code and mathematical models such as those used in AI-based automation; and
(iii) the scale of the computational operations in contexts involving large data sets (big data).

EXPLAINABLE AI (XAI)

INPUT →

Black Box

Input is converted into output

OUTPUT
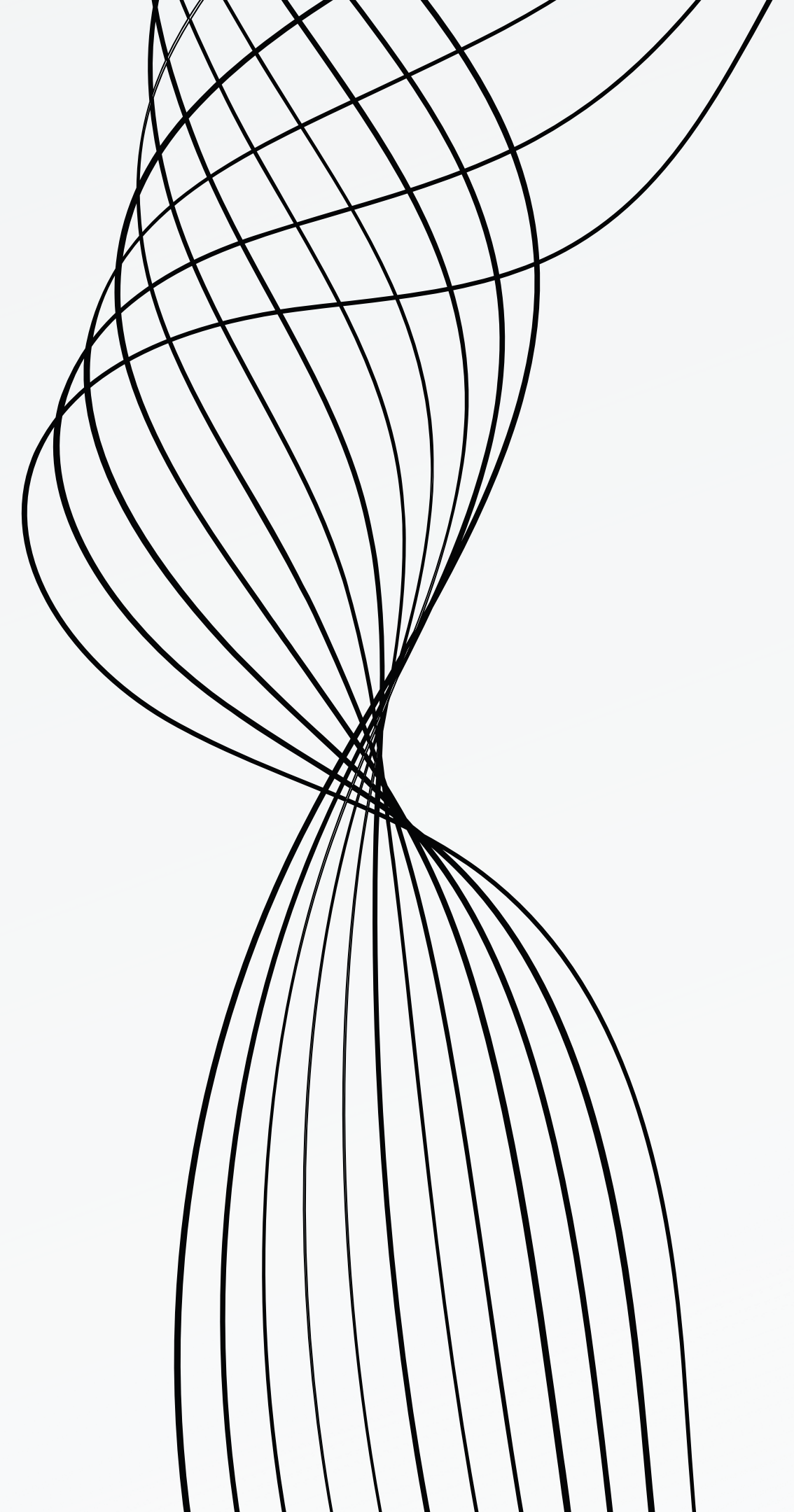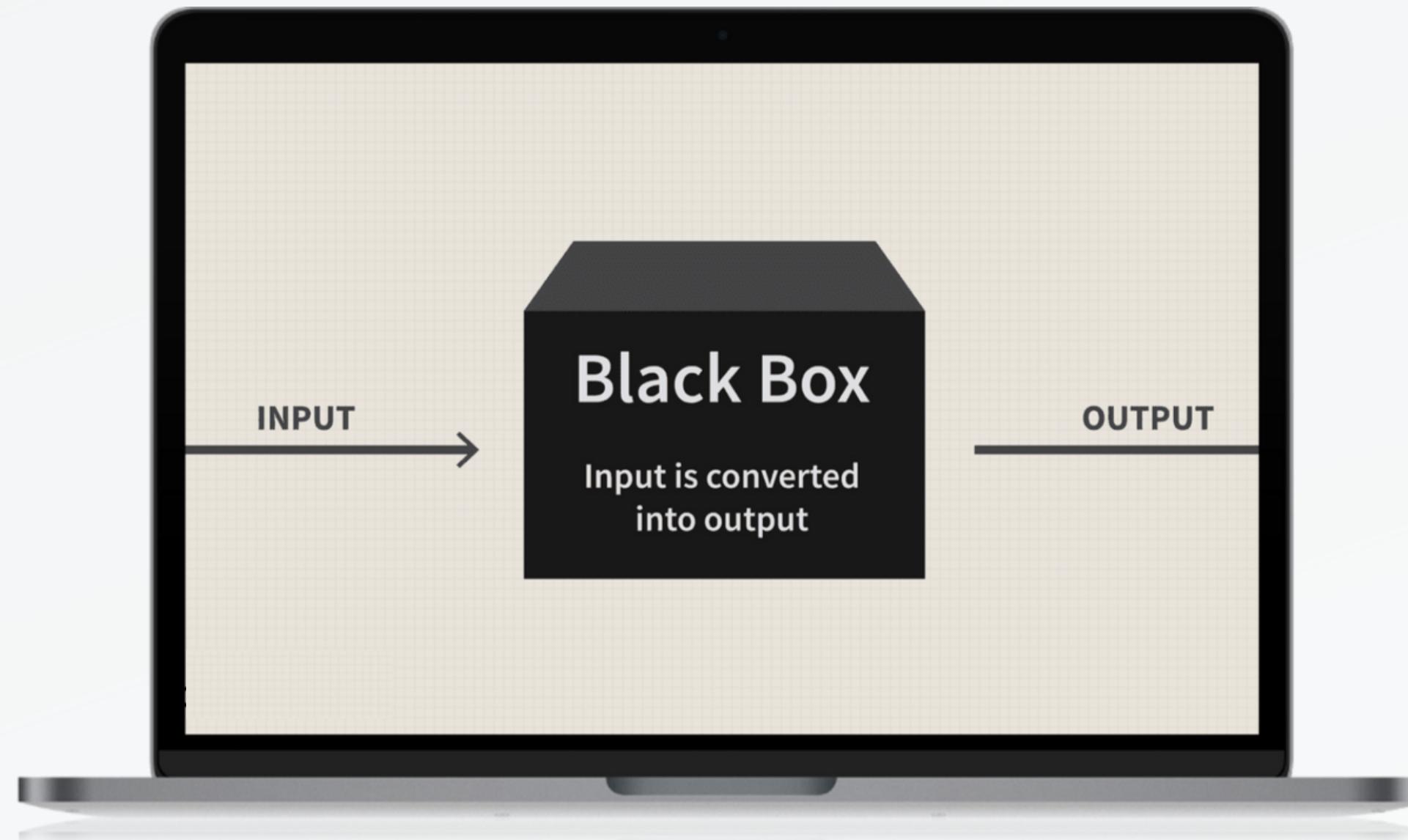
WHEN PLANNING YOUR FUTURE CAREER, DO YOU EVER WONDER IF AI WILL REPLACE YOU?

TECHNOLOGICAL UNEMPLOYMENT

https://willrobotstakemyjob.com/

PRIVACY AND CONTROL
IN THE AGE OF AI

Already existing legal tools:

GDPR: **Privacy by Design and by Default**
GDPR: **Article 22**
DSA provisions, including **transparency obligations**

Planned regulation:

Article 10 AIA: **Data quelity and data management**
Article 13 AIA: **Transparency**
Article 14 AIA: **Human oversight**

HALLUCINATION

In the field of artificial intelligence, a hallucination is a response generated by an AI which contains false or misleading information presented as fact.

Example: In May 2023, it was discovered Stephen Schwartz submitted six fake case precedents generated by ChatGPT in his brief to the Southern District of New York on Mata v. Avianca, a personal injury case against the airline Avianca. Schwartz said that he had never previously used ChatGPT, that he did not recognize the possibility that ChatGPT's output could have been fabricated, and that ChatGPT continued to assert the authenticity of the precedents after their nonexistence was discovered.
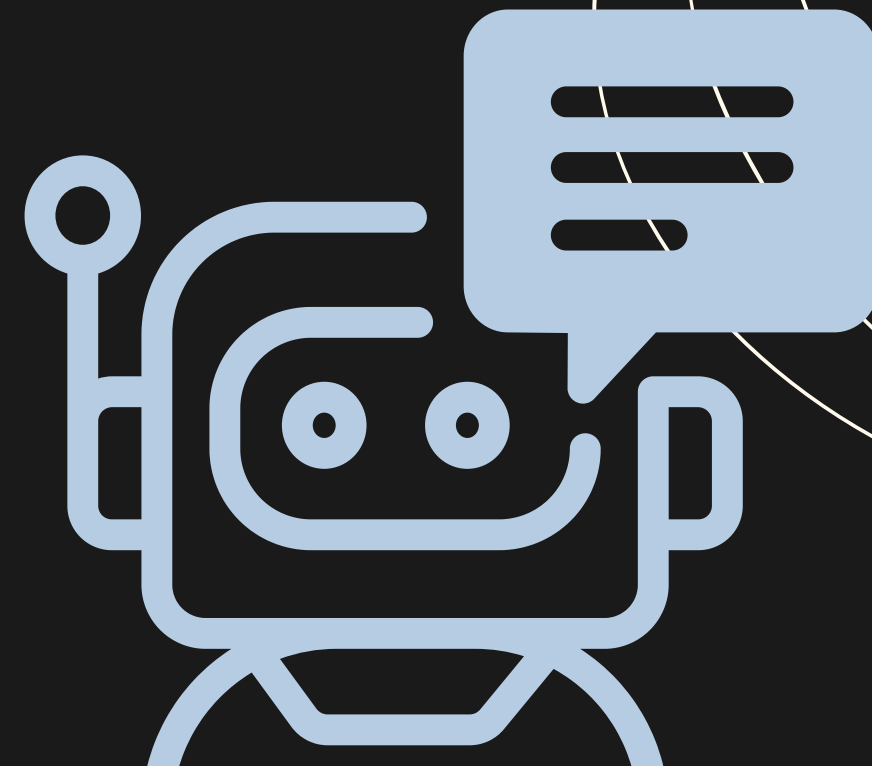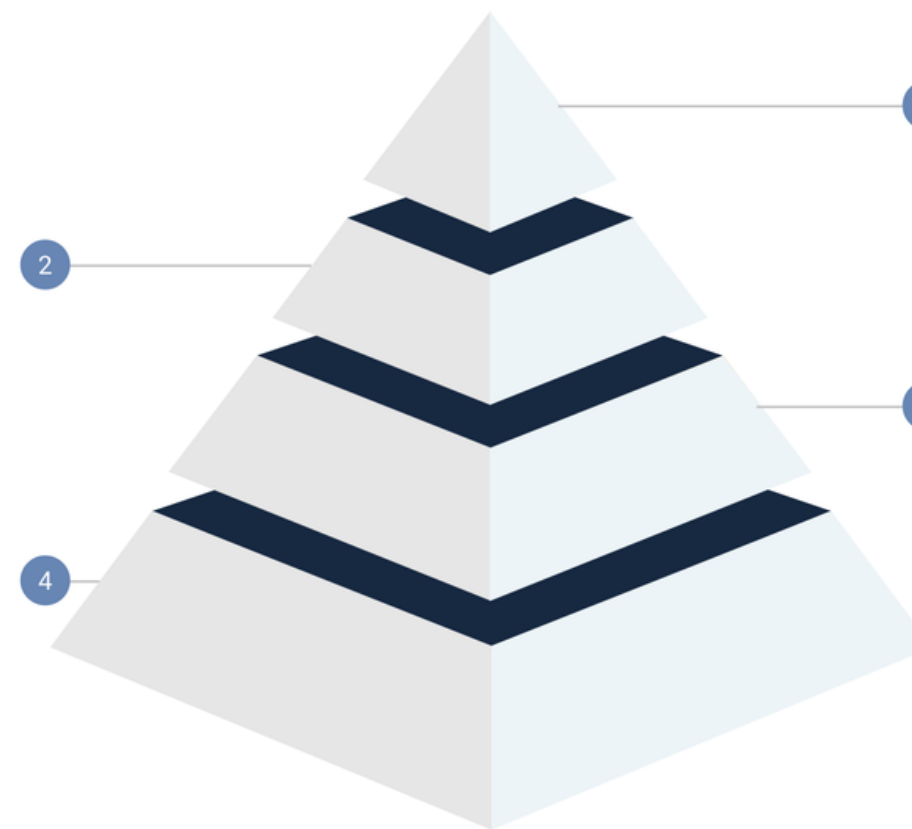
ARTIFICIAL INTELLIGENCE ACT

High Risk

Most regulated AI systems, as these have the potential to cause significant harm if they fail or are misused, e.g. if used in law enforcement or recruiting.

Minimal Risk

All other AI systems, e.g. a spam filter, which can be deployed without additional restrictions.

Unacceptable Risk

Highest level of risk prohibited in the EU. Includes AI systems using e.g. subliminal manipulation or general social scoring.

Limited Risk

Includes AI systems with a risk of manipulation or deceit, e.g. chatbots or emotion recognition systems. Humans must be informed about their interaction with the AI.

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JANUARY 2024
Final text of the AI Act
expected to be adopted

APRIL 2019
AI High-Level Expert
Group presented
Ethics Guidelines for
Trustworthy
Artificial Intelligence

APRIL 2021
European Commission
presented its proposal
for the EU AI Act

DECEMBER 2022
Council of the EU
adopted its common
position on the AI
Act

APRIL 2018
European Commission
published the
communication
Artificial Intelligence
for Europe

FEBRUARY 2020
European Commission
published a White
paper on Artificial
Intelligence

MARCH - SEPTEMBER 2022
EP's Committees published
draft opinions on the
proposed AI

JUNE 2023
EP adopted its
negotiating position on
the AI Act (499 votes in
favor; 28 against; 93
abstentions)

JUNE 2023
Beginning of trilogue
negotiations

COURSE CREDIT INFORMATION

1. Obtain credit for tutorial classes.
2. Test in lecture on 25.01.2024 from 11:30 to 13:00 in room 218A.
3. The test is a one-choice format.
4. Test subject area: Focus on sources indicated in the presentation of the first lecture (slide 9), with particular emphasis on topics covered during tutorial classes and lectures.

https://prawo.uni.wroc.pl/node/49691

THANK YOU

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