

Equality, artificial intelligence, algorithms and automated decisions: How to detect and address discrimination in the context of AI?

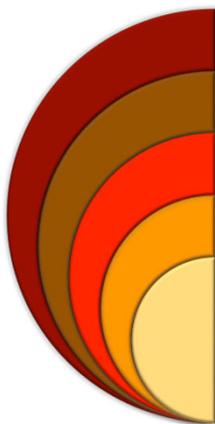
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›› ERA, Madrid – September 25, 2024

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Relevant legislation

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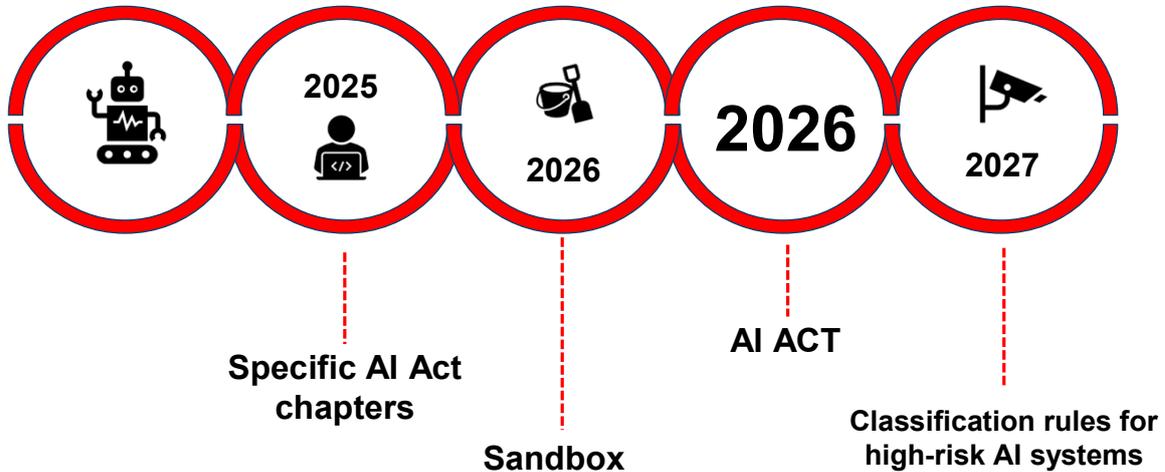


-  **Directive on race equality (2000/43/CE)**
-  **Directive on equal treatment in employment and occupation (2000/78/CE)**
-  **Artificial Intelligence Act, 13 June 2024**
-  **Draft of Legislation n. 1146/2024**
-  **Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law, 16 September 2024**

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AI Act - Entry into force and application

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Council of Europe Framework Convention on Artificial Intelligence

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Article 10 – Equality and non-discrimination

1. Each Party shall adopt or maintain measures with a view to ensuring that activities within the lifecycle of artificial intelligence systems **respect equality, including gender equality, and the prohibition of discrimination, as provided under applicable international and domestic law.**
2. Each Party undertakes to adopt or maintain measures aimed at **overcoming inequalities to achieve fair, just and equitable outcomes**, in line with its applicable domestic and international human rights obligations, in relation to activities within the lifecycle of artificial intelligence systems.

Council of Europe Framework Convention on Artificial Intelligence and Human Rights, Democracy and the Rule of Law

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Artificial intelligence

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«'AI system' means a machine-based system designed to operate with varying levels of autonomy, that may exhibit adaptiveness after deployment and that, for explicit or implicit objectives, infers, from the input it receives, how to generate outputs such as predictions, content, recommendations, or decisions that can influence physical or virtual environments»

Article 3, Artificial Intelligence Act, June 13, 2024

«A test for intelligence in a computer, requiring that a human being should be unable to distinguish the machine from another human being by using the replies to questions put to both»

Turing test, the *Imitation Game*, Alan M. Turing, 1950

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AI Act - Structure and key points

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Provide clear requirements and obligations for specific uses of AI: categorizing AI unacceptable, high, or low/minimal risk.



Address the risks created by AI applications and highlight high-risk applications, ensuring that those placed on the EU market are safe.

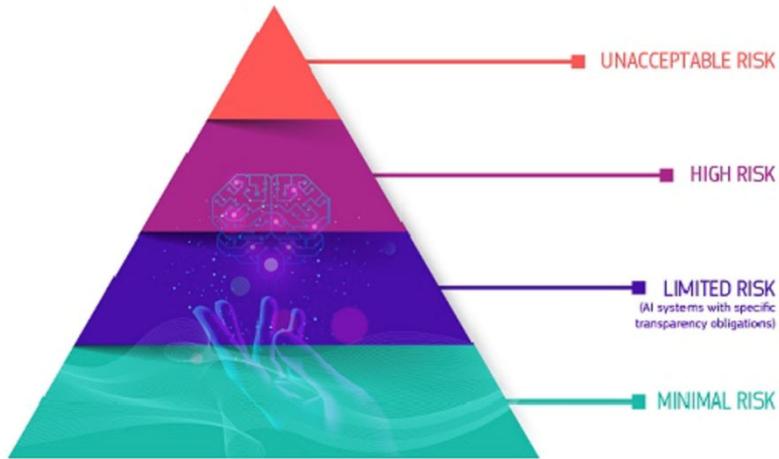


Propose a series of conformity assessments, transparency requirements, and a governance structure at the European and national level.

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AI ACT – structure and functioning

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European Commission site: <https://digital-strategy.ec.europa.eu/en/policies/regulatory-framework-ai>

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AI and Human Resources

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Prohibited AI practices (Art. 5)

(f) *the placing on the market, the putting into service for this specific purpose, or the use of **AI systems to infer emotions of a natural person in the areas of workplace** and education institutions, except where the use of the AI system is intended to be put in place or into the market for medical or safety reasons*

High-risk AI systems referred to in Article 6(2) (Annex III)

Employment, workers' management and access to self-employment:

- (a) *AI systems intended to be used for the **recruitment** or **selection** of natural persons, in particular to place targeted job advertisements, to analyse and filter job applications, and to evaluate candidates;*
- (b) *AI systems intended to be used to make decisions affecting terms of work-related relationships, the **promotion or termination** of work-related contractual relationships, to **allocate tasks** based on individual behaviour or personal traits or characteristics or **to monitor and evaluate the performance and behaviour** of persons in such relationships.*

AI Act - Gender equality: a right to be protected

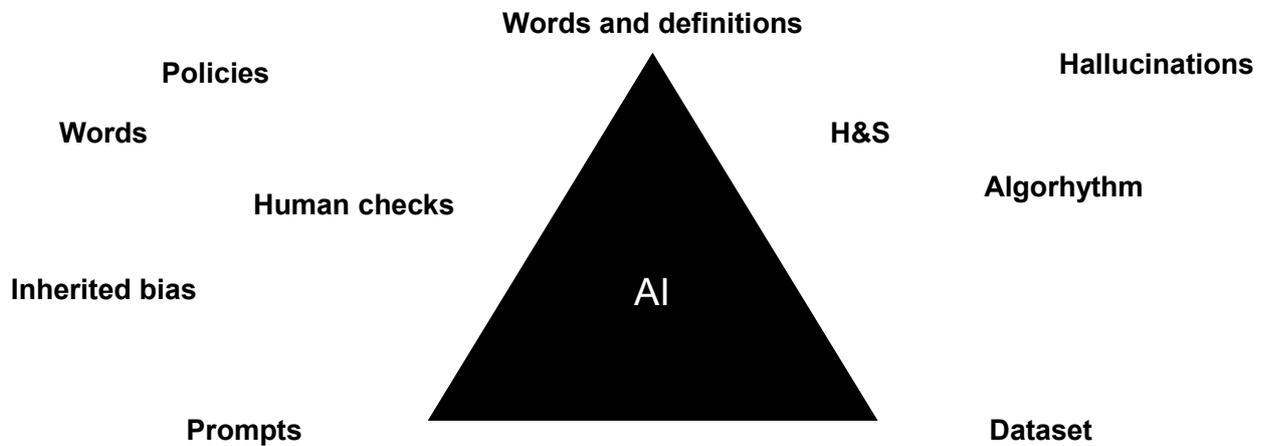
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«The extent of the adverse impact caused by the AI system on the fundamental rights protected by the Charter is of particular relevance when classifying an AI system as high risk. Those rights include [...] gender equality»

Recital 48, Artificial Intelligence Act, June 13, 2024

Can AI discriminate?

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Algorithmic bias

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- «[...]
- **Differential treatment based on protected characteristics**, such as discrimination and bias-motivated crimes. This refers to an inclination for or against a person or group based on protected characteristics, such as ethnic origin, **gender**, religion, colour or sexual orientation. Discrimination defines a situation in which an individual is disadvantaged in some way on the basis of 'one or multiple protected grounds'. [...]
 - **Differentiation**. Bias understood in this sense is necessary for the proper functioning of a statistical or machine learning algorithm. For example, a machine learning model that has to differentiate between oranges and pears has to have bias towards labelling round, orange objects as oranges. Such use of bias is mainly found in computer science and machine learning.
 - **Statistical bias**. This refers to the systematic difference between an estimated parameter and its true value. Statistical bias exists when data are not adequately measuring what they are intended to measure. For example, gross domestic product per capita is not necessarily a good measure of the standard of living in a country, as it does not account for inequality of income distribution. In addition, data and the resulting statistical estimates may not be representative of the target population. For example, if a sample of the general population contains more men than women, it is said to be biased towards men. Bias is mainly understood in this way in statistics.
[...]

"Bias in Algorithms – Artificial Intelligence and Discrimination" - European Union Agency for Fundamental Rights, Vienna 2022

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Discrimination and AI

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**Direct
discrimination**



The moment the provider writes the algorithm



The output of the machine after the input of the data has happened



**Indirect
discrimination**

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Liability

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Who is liable for an AI's wrongdoing?



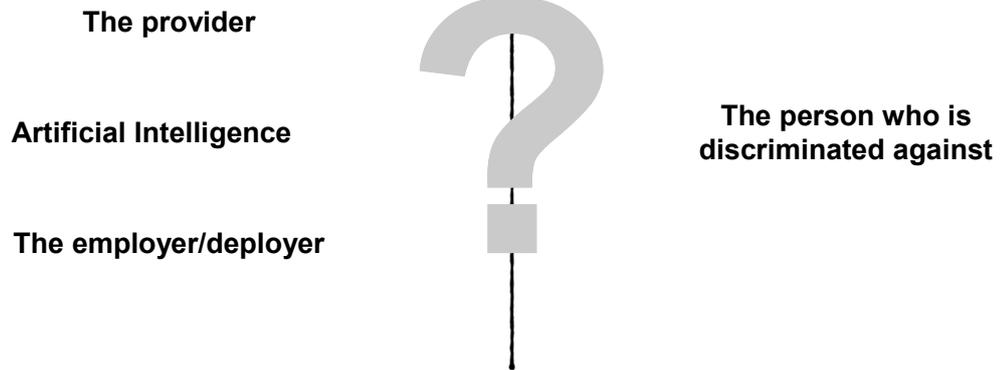
Civil Law

Criminal Law

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The robot did it

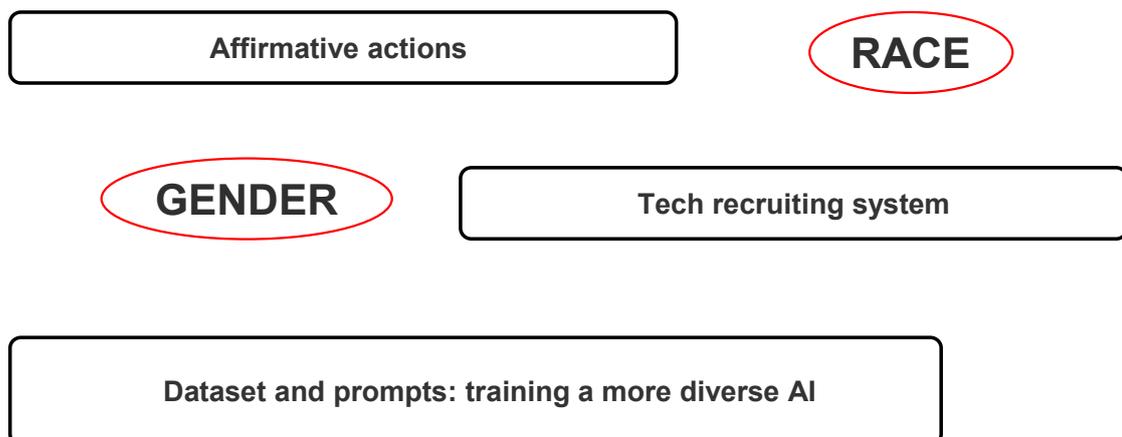
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AI discrimination: major risks

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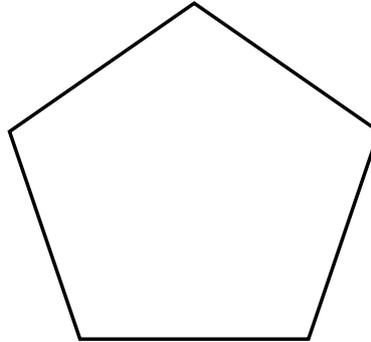
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Remedies

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Collective actions. Unions, associations and class actions

Internal review and policies



Litigation. Algorithm as an employer

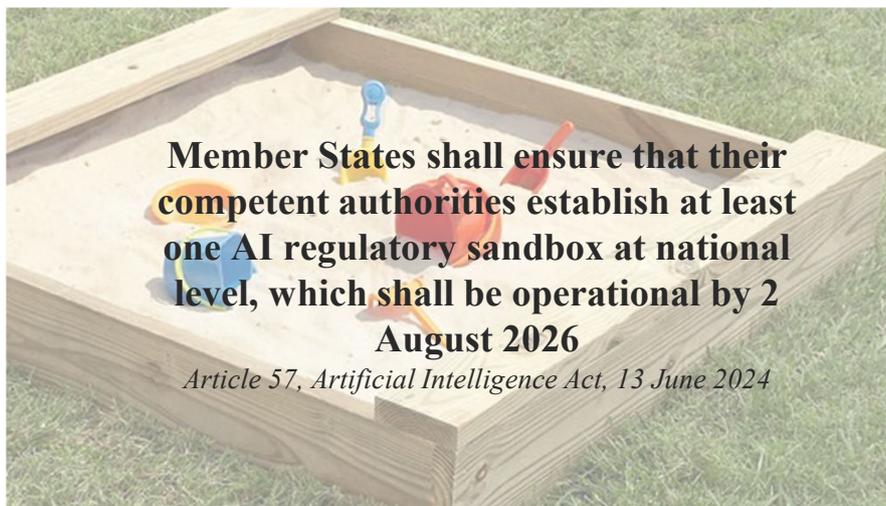
Data protection authorities

Institutional supervision (Sandbox)

Authorities. Investigations, orders and fines

Sandbox Regulation

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Sandbox Regulation

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REGULATOR Y SANDBOXES

“regulatory sandboxes generally refer to regulatory tools allowing businesses to test and experiment with new and innovative products, services or businesses under supervision of a regulator for a limited period of time. As such, regulatory sandboxes have a double role: 1) they foster business learning, i.e. the development and testing of innovations in a real-world environment; and 2) support regulatory learning, i.e. the formulation of experimental legal regimes to guide and support businesses in their innovation activities under the supervision of a regulatory authority. In practice, the approach aims to enable experimental innovation within a framework of controlled risks and supervision, and to improve regulators' understanding of new technologies”

European Parliamentary Research Service - Members' Research Service PE 733.544, June 2022

The future of the future

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- ➔ AI Act, GDPR, Supply Chain and Working Conditions: the framework is there
- ➔ Company and individuals: personal AI, policies and health and safety
- ➔ Regulate what you know / fast progress ➔ continuous monitoring

Thank you!