Why, AI.

AI will end discrimination.

MYTH

As part of society, AI is deeply rooted in it and as such not separable from structures of discrimination. Due to this socio-technical embeddedness, AI cannotmake discrimination disappear by itself .
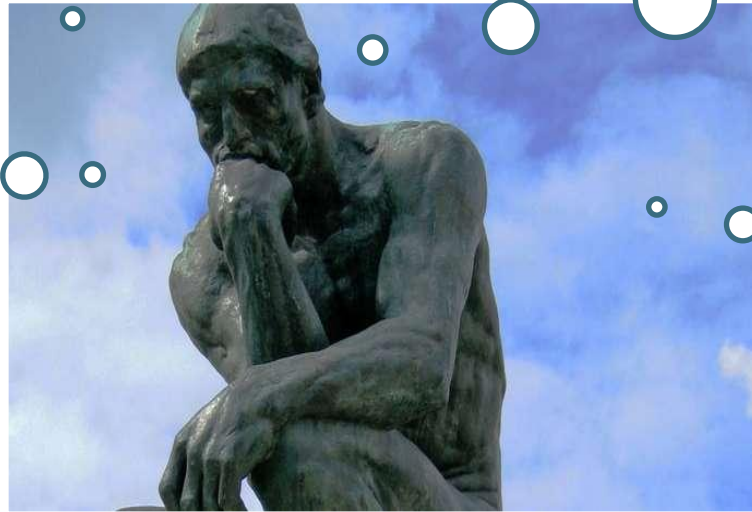
BUSTED

MYTH

Artificial Intelligence ends discrimination, doesn't it?

Instead, Artificial Intelligence seems to make better choices than people.

Well, at least, Artificial Intelligence does not judge people by their status...

...because Artificial Intelligence can be instructed in a way to treat all equal people/groups equally.
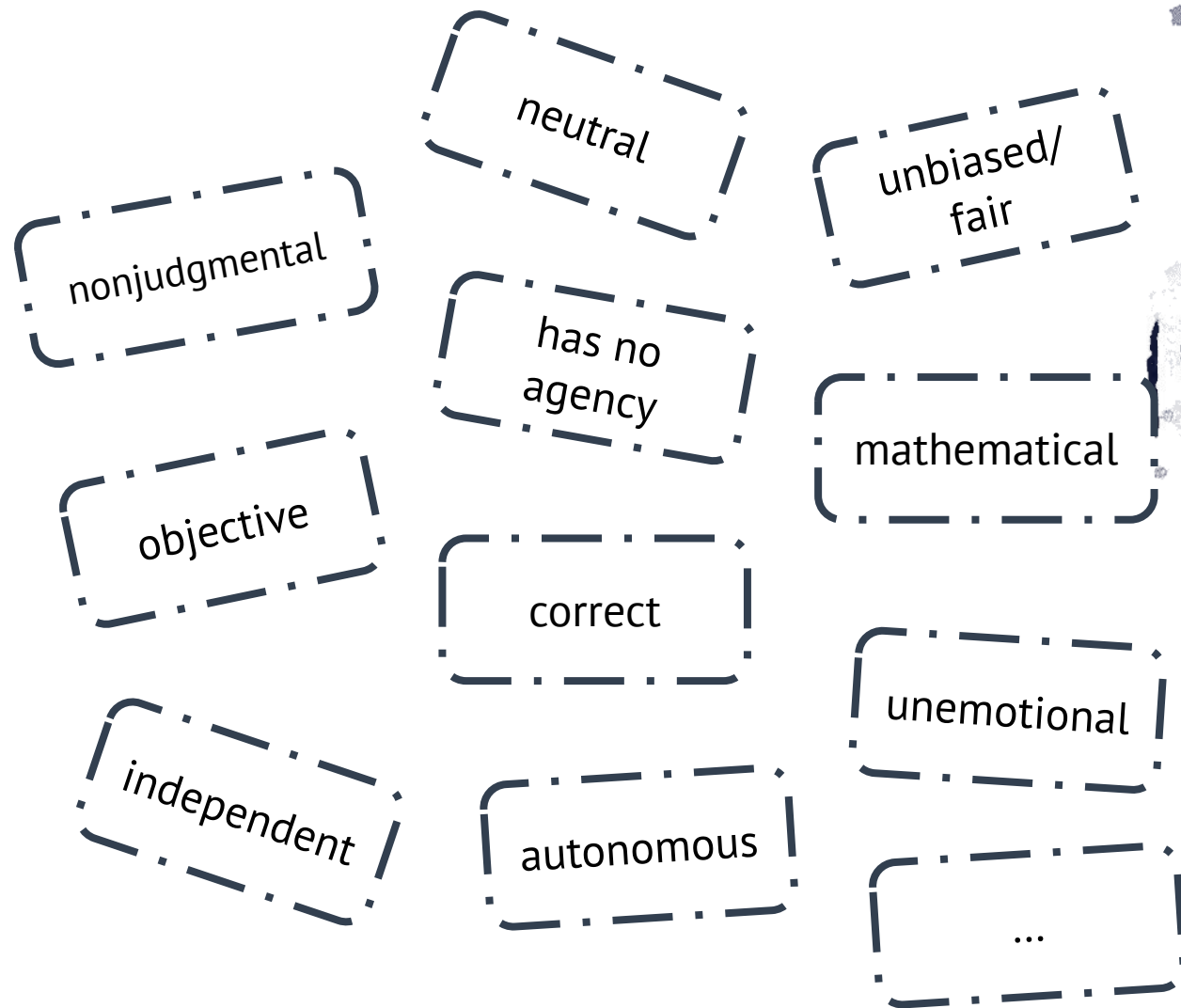
Hmm. Unlike me, other people are so emotional, moody, unfair, fallible.

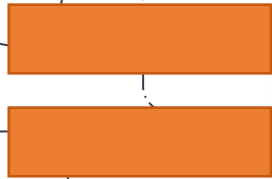Thus, can AI end discrimination in the world?
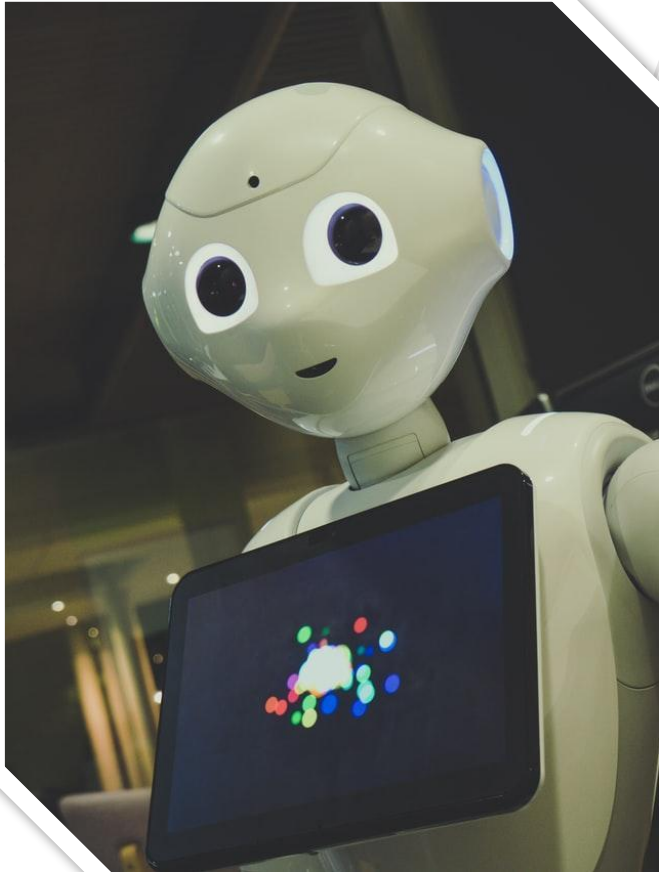

Source images: https://www.britannica.com/topic/The-Thinker-sculpture-by-Rodin

AI: associations

neutral

unbiased/ fair

nonjudgmental

has no agency

mathematical

objective

correct

unemotional

independent

autonomous

...

AI: associations

unbi...
f...

une...

uner...

mous

...

?

AI: associations

Source Images: left: Photo by Owen Beard on Unsplash // right Photo by Izabela Rutkowski on Unsplash
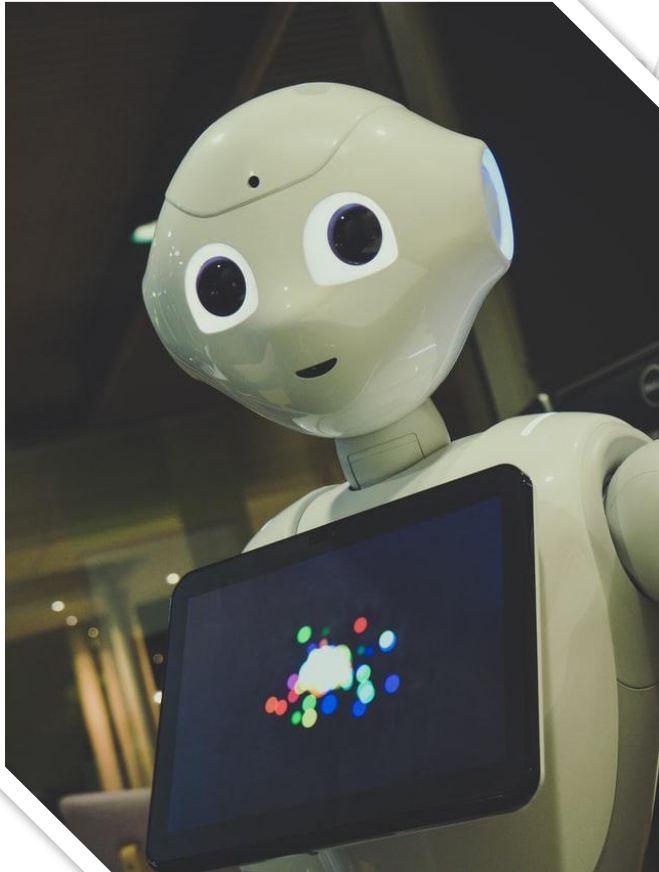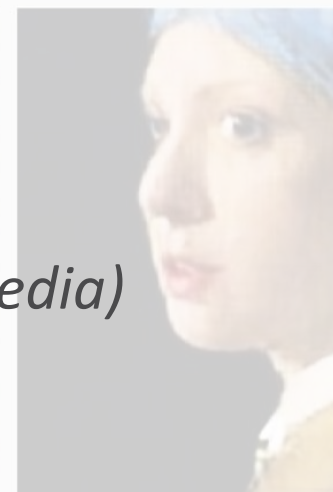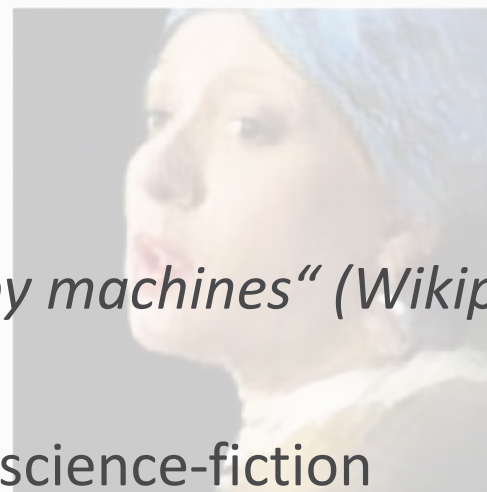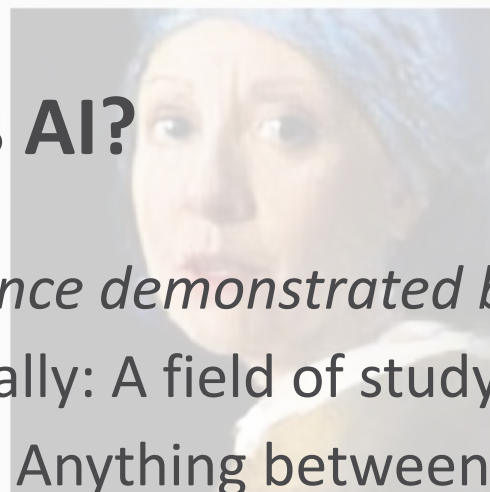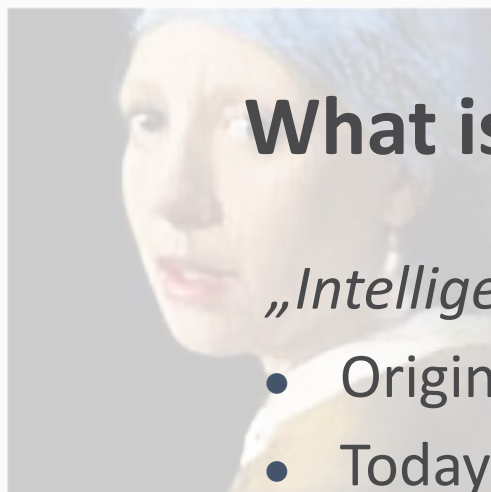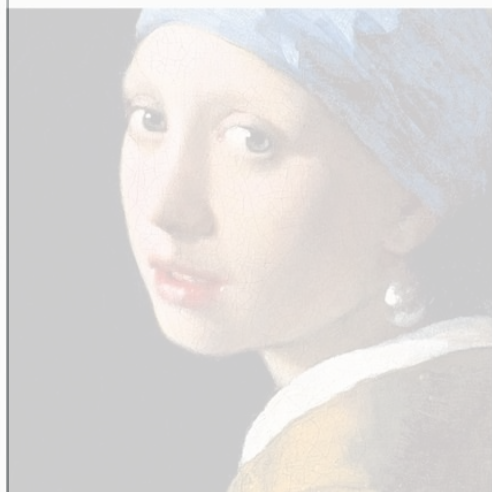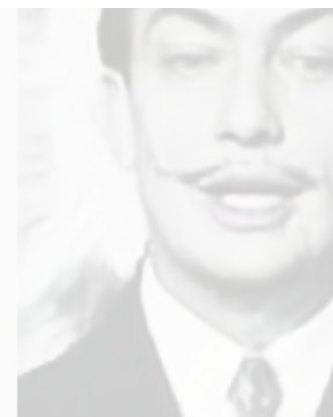
What is AI?

„Intelligence demonstrated by machines" (Wikipedia)

- Originally: A field of study
- Today: Anything between science-fiction dys-/utopias and technologies exhibiting reasoning
- Here: Data-driven (semi-)automatic decision-making systems

Zakharov, Egor, et al. "Few-Shot Adversarial Learning of Realistic Neural Talking Head Models." (2019)

AI gone wrong

Overcoming Racial Bias In AI Systems And Startlingly Even In AI Self-Driving Cars

Racial bias in a medical algorithm favors white patients over sicker black patients

AI expert calls for end to UK use of 'racially biased' algorithms
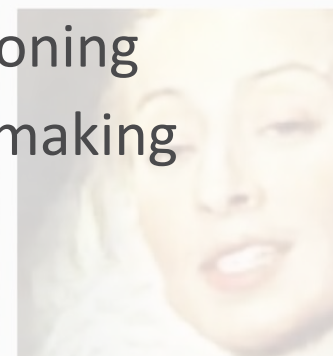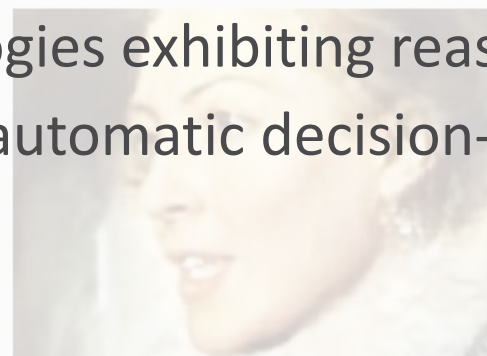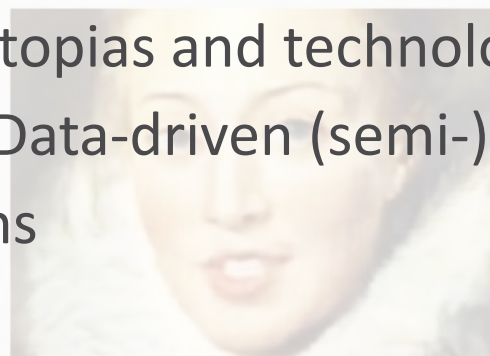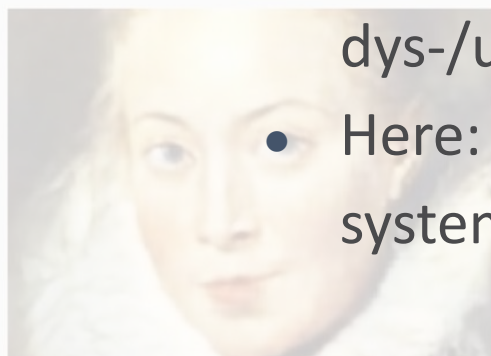
AI Bias Could Put Women's Lives At Risk – A Challenge For Regulators

Gender bias in AI: building fairer algorithms

Bias in AI: A problem recognized but still unresolved

Amazon, Apple, Google, IBM, and Microsoft worse at transcribing black people's voices than white people's with AI voice recognition, study finds

Millions of black people affected by racial bias in health-care algorithms

Study reveals rampant racism in decision-making software used by US hospitals – and highlights ways to correct it.

When It Comes to Gorillas, Google Photos Remains Blind

Google promised a fix after its photo-categorization software labeled black people as gorillas in 2015. More than two years later, it hasn't found one.

The Week in Tech: Algorithmic Bias Is Bad. Uncovering It Is Good.

Google 'fixed' its racist algorithm by removing gorillas from its image-labeling tech

Artificial Intelligence has a gender bias problem – just ask Siri

future zone

News-Ticker Channels fuzo Watch fuzo Features Sp

§ Netzpolitik

Der AMS-Algorithmus ist ein „Parade-beispiel für Diskriminierung"

The Best Algorithms Struggle to Recognize Black Faces Equally

US government tests find even top-performing facial recognition systems misidentify blacks at rates five to 10 times higher than they do whites.

Source Images:
https://towardsdatascience.com/algorithm-bias-in-artificial-intelligence-needs-to-be-discussed-and-addressed-8d369d675a70?gi=6da14f8698f3

AI „in the wild"

Aha! AI "in the wild", like outside a laboratory environment or outside of some programmer geniuses' garages is *pretty* discriminatory, sometimes even worse than humans.
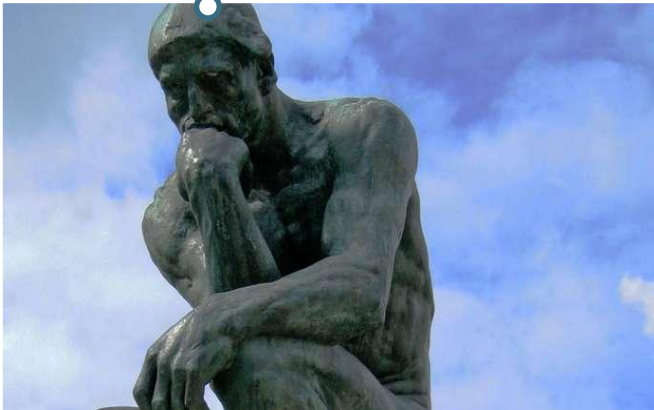
Source images: https://www.britannica.com/topic/The-Thinker-sculpture-by-Rodin

AI as sociotechnical system

data

model

AI practitioner

research teams

private companies

business model

(computer) Science

history

society

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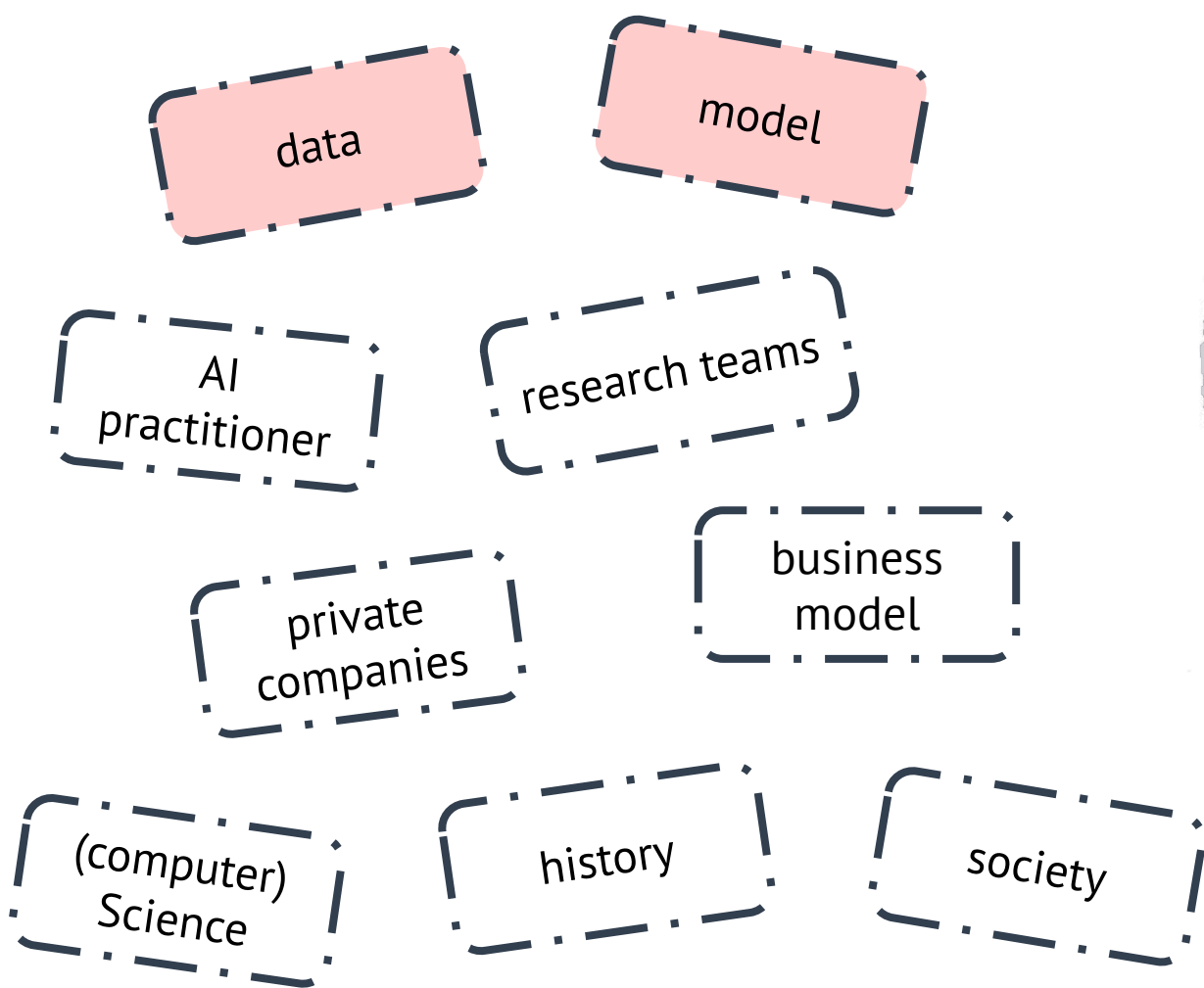private companies

business model
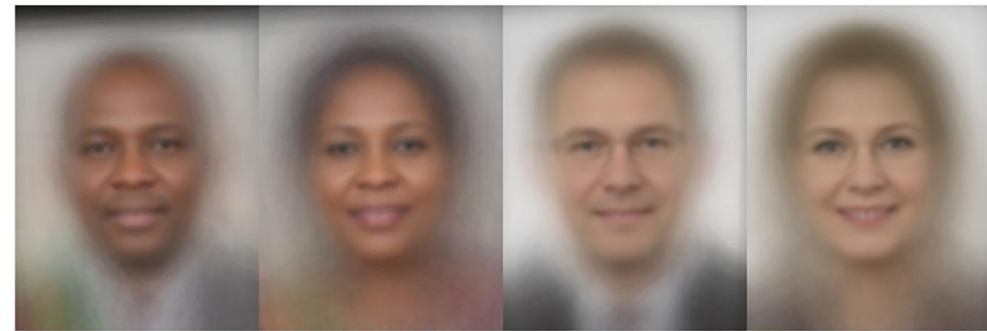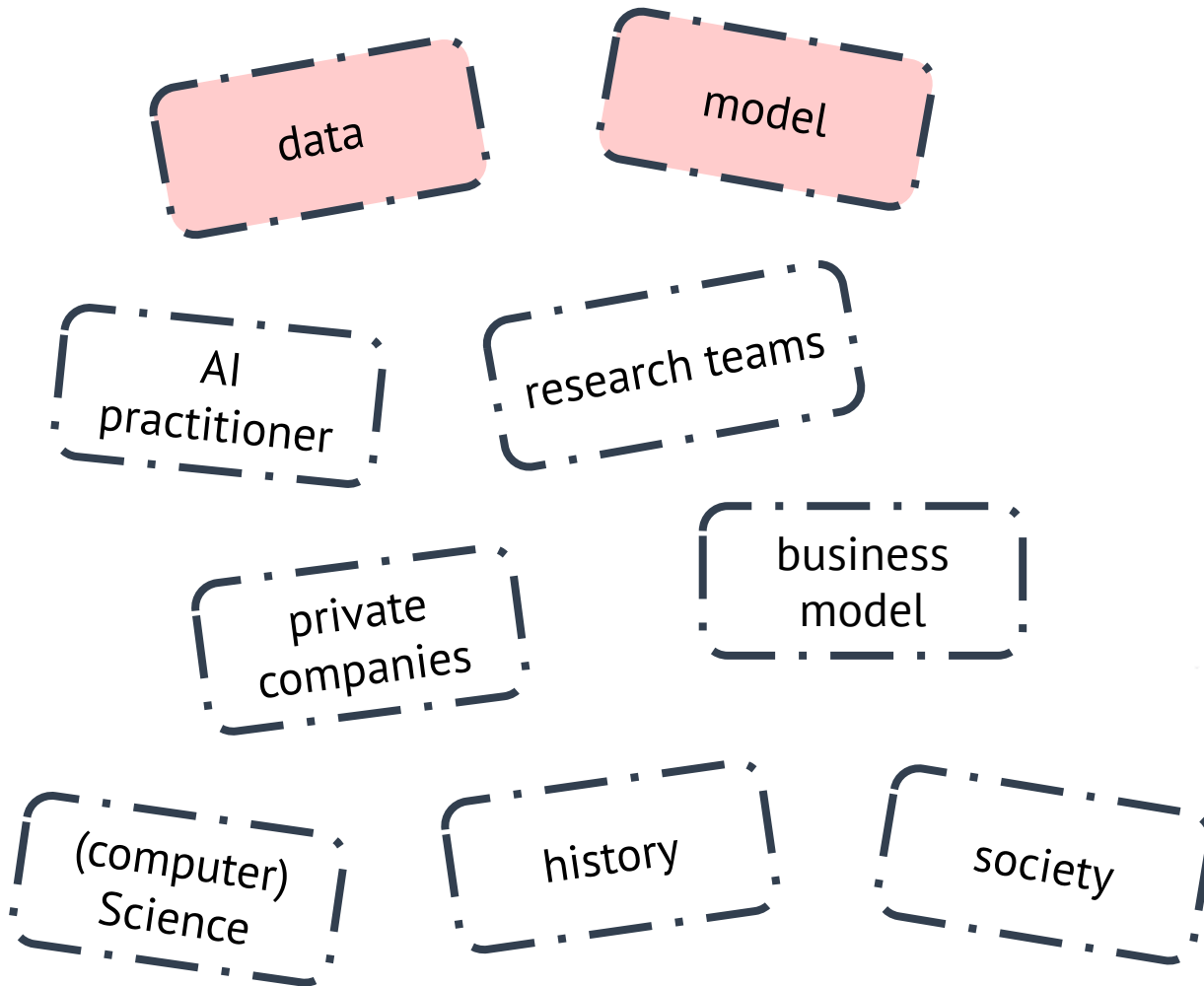
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Representation issues

Gender Classifier	Darker Male	Darker Female	Lighter Male	Lighter Female	Largest Gap
Microsoft	94.0%	79.2%	100%	98.3%	20.8%
FACE++	99.3%	65.5%	99.2%	94.0%	33.8%
IBM	88.0%	65.3%	99.7%	92.9%	34.4%

Source: https://ars.electronica.art/outofthebox/de/gender-shades/

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„Data fundamentalism"

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„Data fundamentalism"

Source: Faception Website in 2018 https://www.faception.com/our-technology

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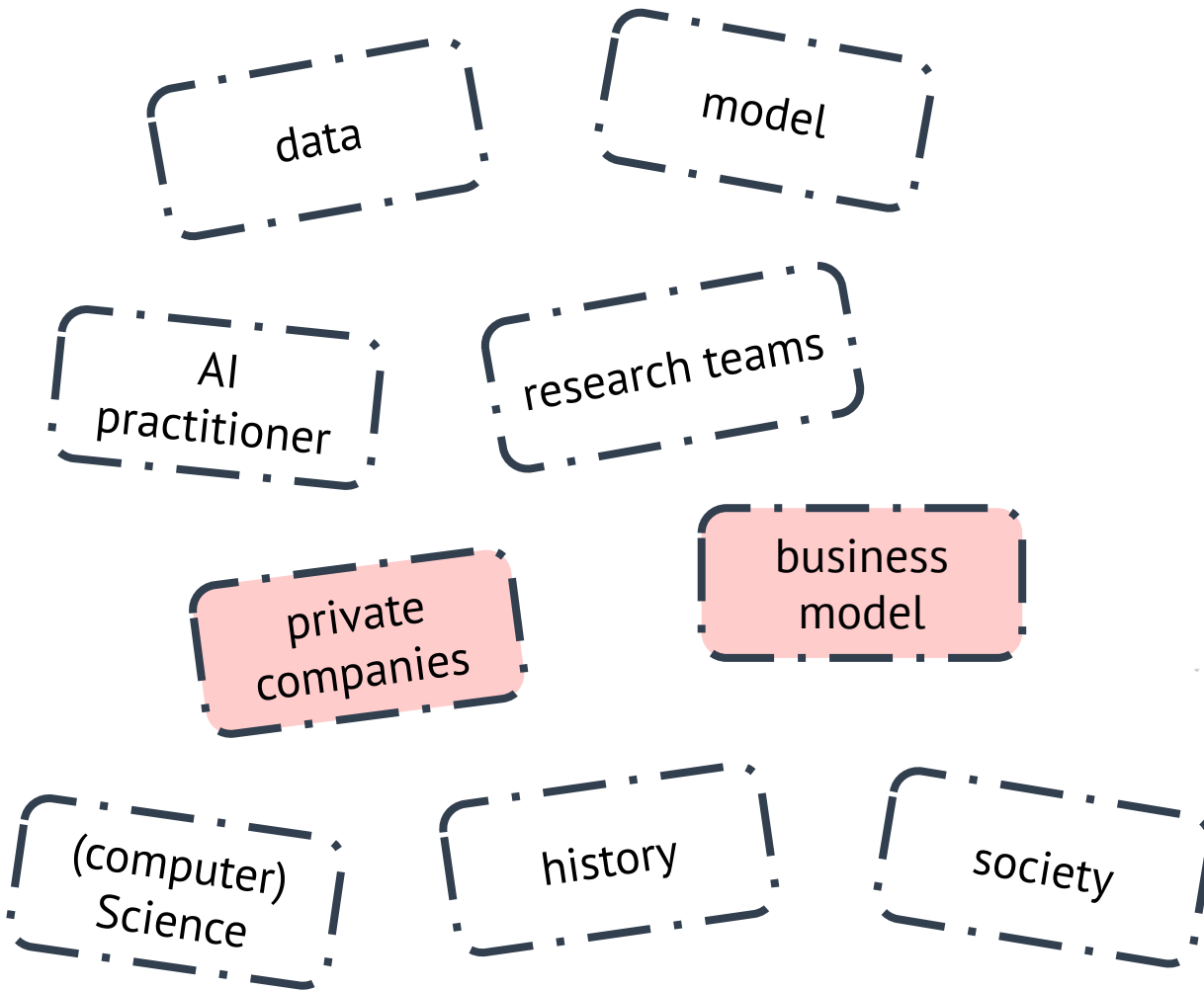
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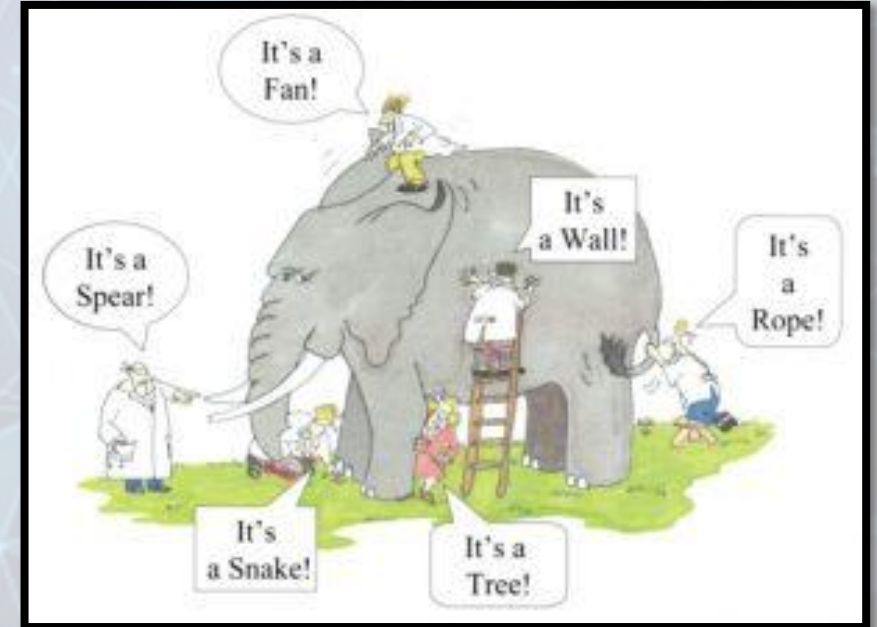
Source: Frontex
https://frontex.europa.eu/media-centre/news/news-release/artificial-intelligence-based-capabilities-for-european-border-and-coast-guard-1Dczge
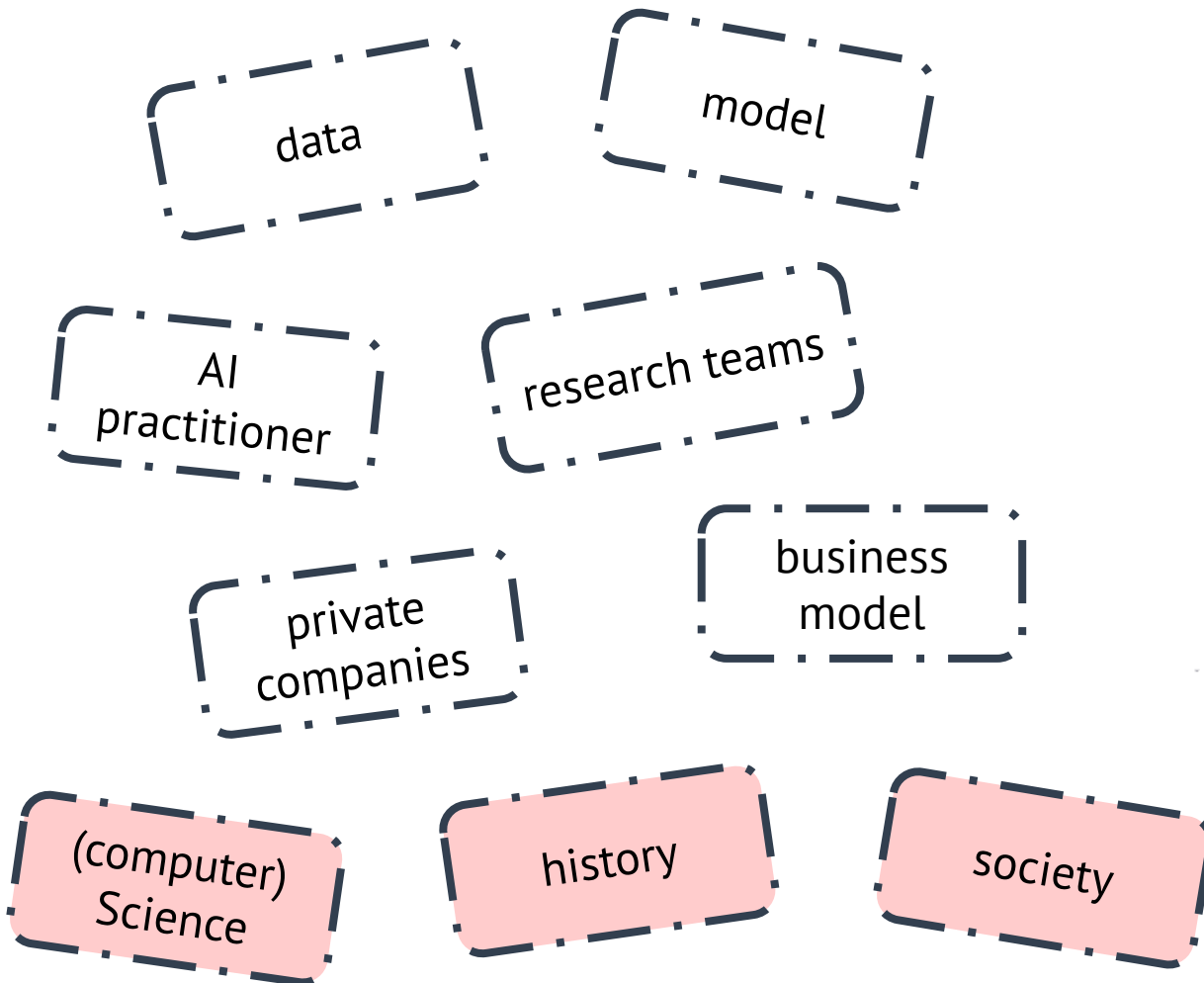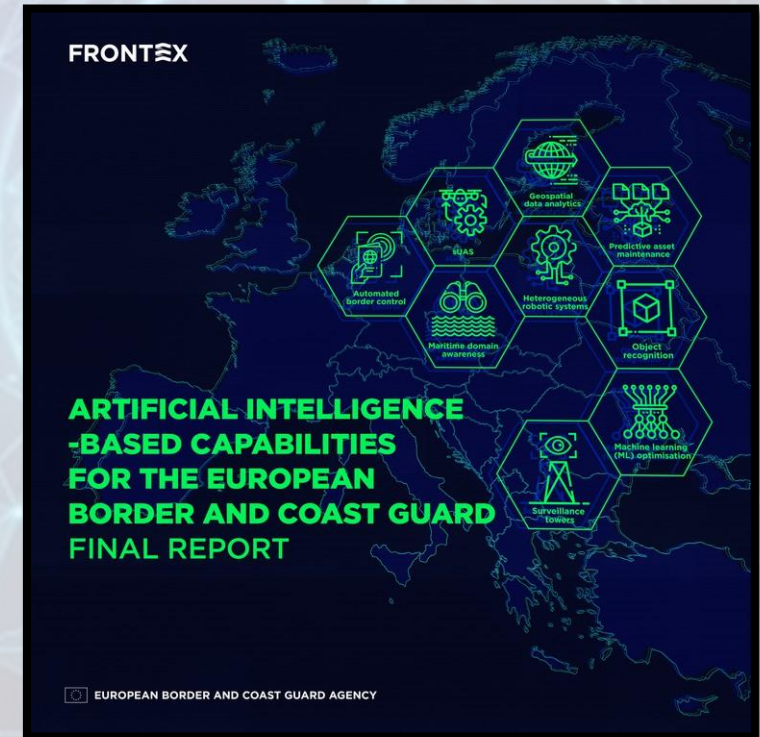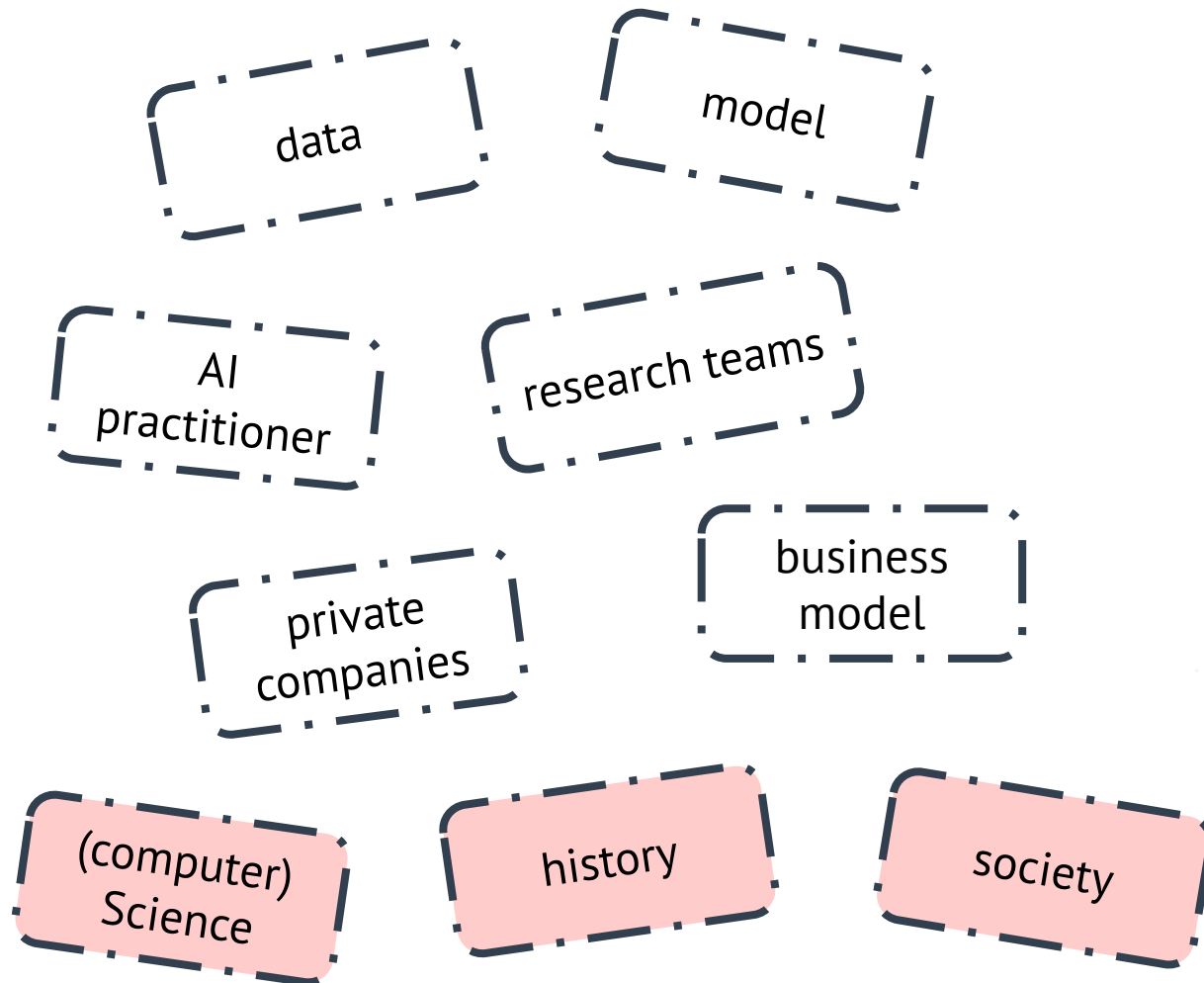
What now? Emancipatory AI or burn it?

AI...
- ... is not separable from the socio-political
- ... will not *fix discrimination*
- ... *encodes* social inequalities

What now? Emancipatory AI or burn it?
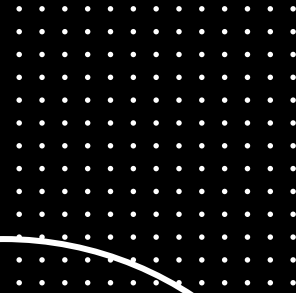
"*I argue that tech fixes often hide, speed up, and even deepen discrimination, while appearing to be neutral or benevolent when compared to the racism of a previous era. This set of practices that I call the* **New Jim Code** *encompasses a range of discriminatory designs – some that explicitly work to amplify hierarchies, many that ignore and thus replicate social divisions, and a number that aim to fix racial bias but end up doing the opposite*" (Ruha Benjamin, Race after Technology, 2020, p. 9)
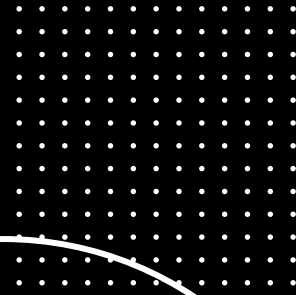
What now? Emancipatory AI or burn it?

AI...

- ... needs a socio-technical *decoding*
- ... may serve as a proxy to discuss deeply rooted societal inequalities

Why discrimination cannot just end

- **Discrimination is no "irrational" wrongdoing** based on individual choices whether these choices are made by an individual or an AI.

- **Discrimination is a structural, systematic phenomena.** Different modes of discrimination like class, racism, sexism, antisemitism, patriarchy cannot be abolished or altered by individual (conscious or unconscious) choices.

- **Understanding AI from an intersectional sociotechnical perspective means:** A ‚fair' AI can treat equal individuals or groups equally, but it still is embedded into wider social structures of discrimination and oppression and does not imply a certain treatment is just.

What AI scientists and practicioners can do

❖ **Sociotechnical embedding:** AI & related technologies

❖ **Democratization:** Inclusion of all stakeholders, especially the persons affected by the AI

❖ **Design:** Participatory and inclusive

❖ **Public Ownership:** Data & digital infrastructures

❖ **Open Science:** Transparency & comprehensibility

❖ **Self-Reflection:** on your situating in the world

What we can do

❖ Let's educate ourselves and enhance our digital literacy (like you do, right now!)

❖ Support algorithmic watchdogs

❖ Have a public debate around the areas in which AI should be deployed.

There is no technical fix for discrimination.

Fight or support fights against discrimination in all parts of society.
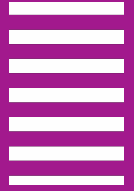
Thank you.

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