Artificial Intelligence: The Risks and Opportunities

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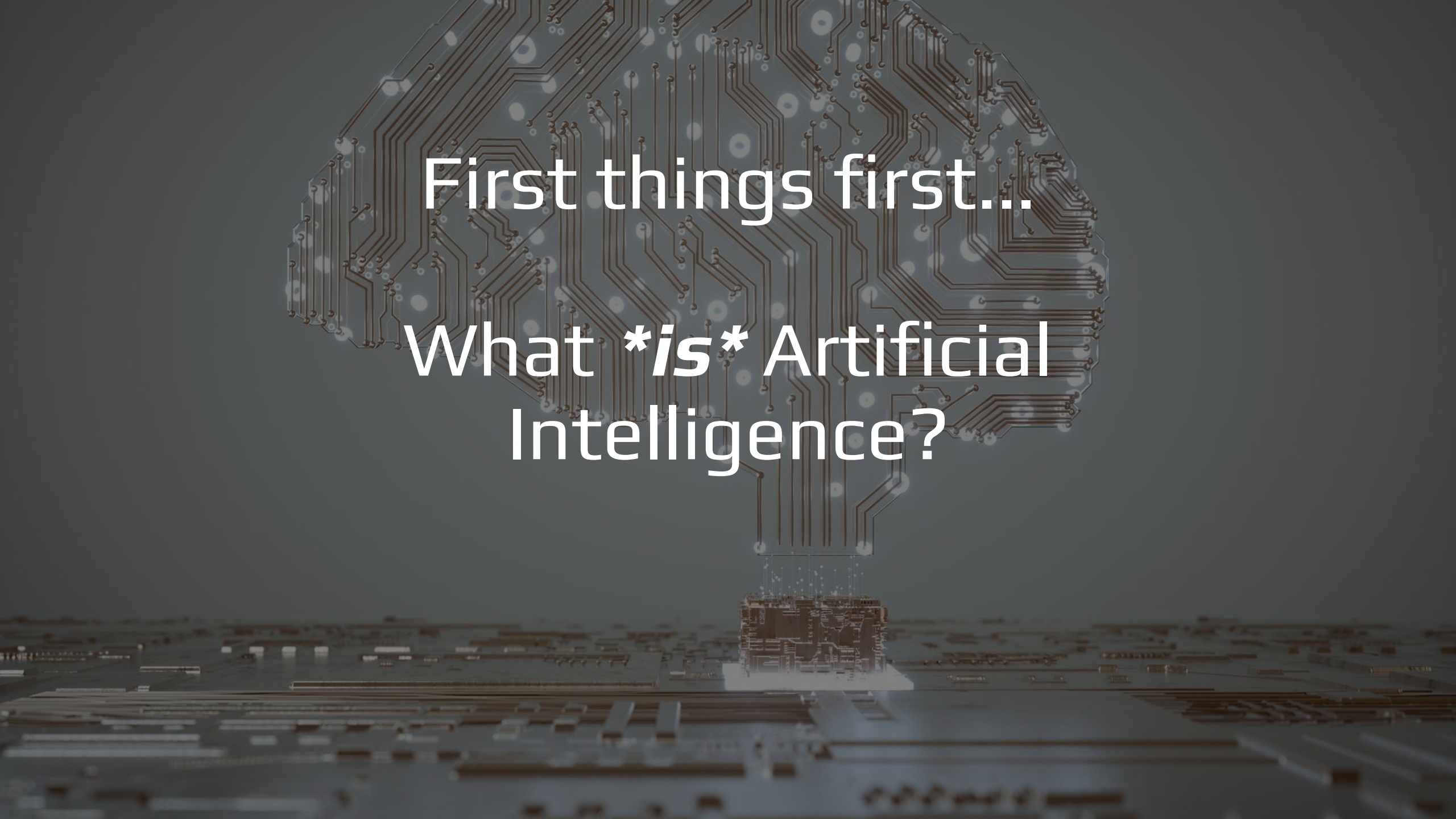
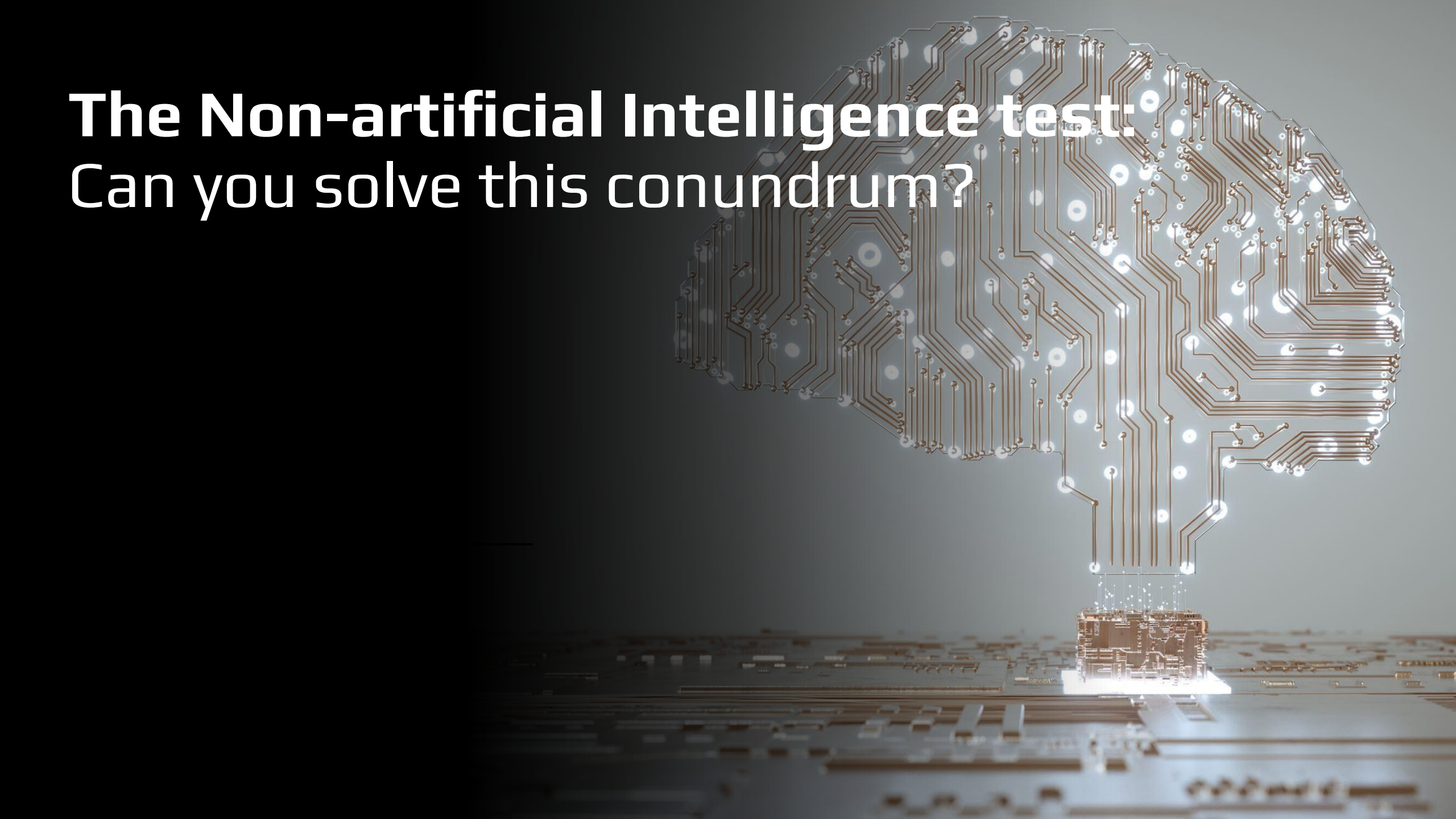
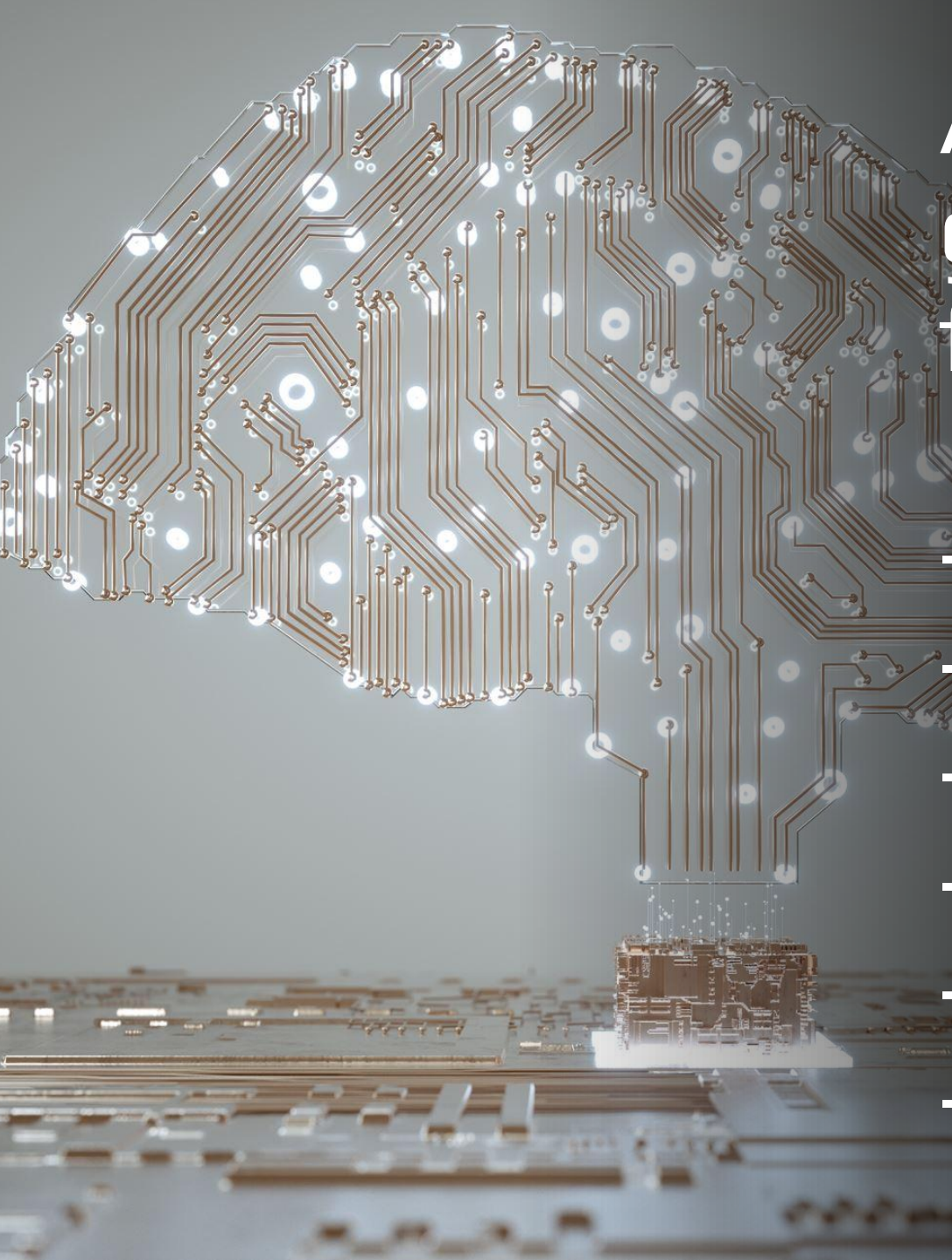


First things first...

What **is** Artificial Intelligence?

The Non-artificial Intelligence test:
Can you solve this conundrum?





AI can only
generate numbers
from numbers, but...

- Categories are numbers
- Images are numbers
- Sounds are numbers
- Words are numbers
- Emotions are numbers
- Behaviour is numbers

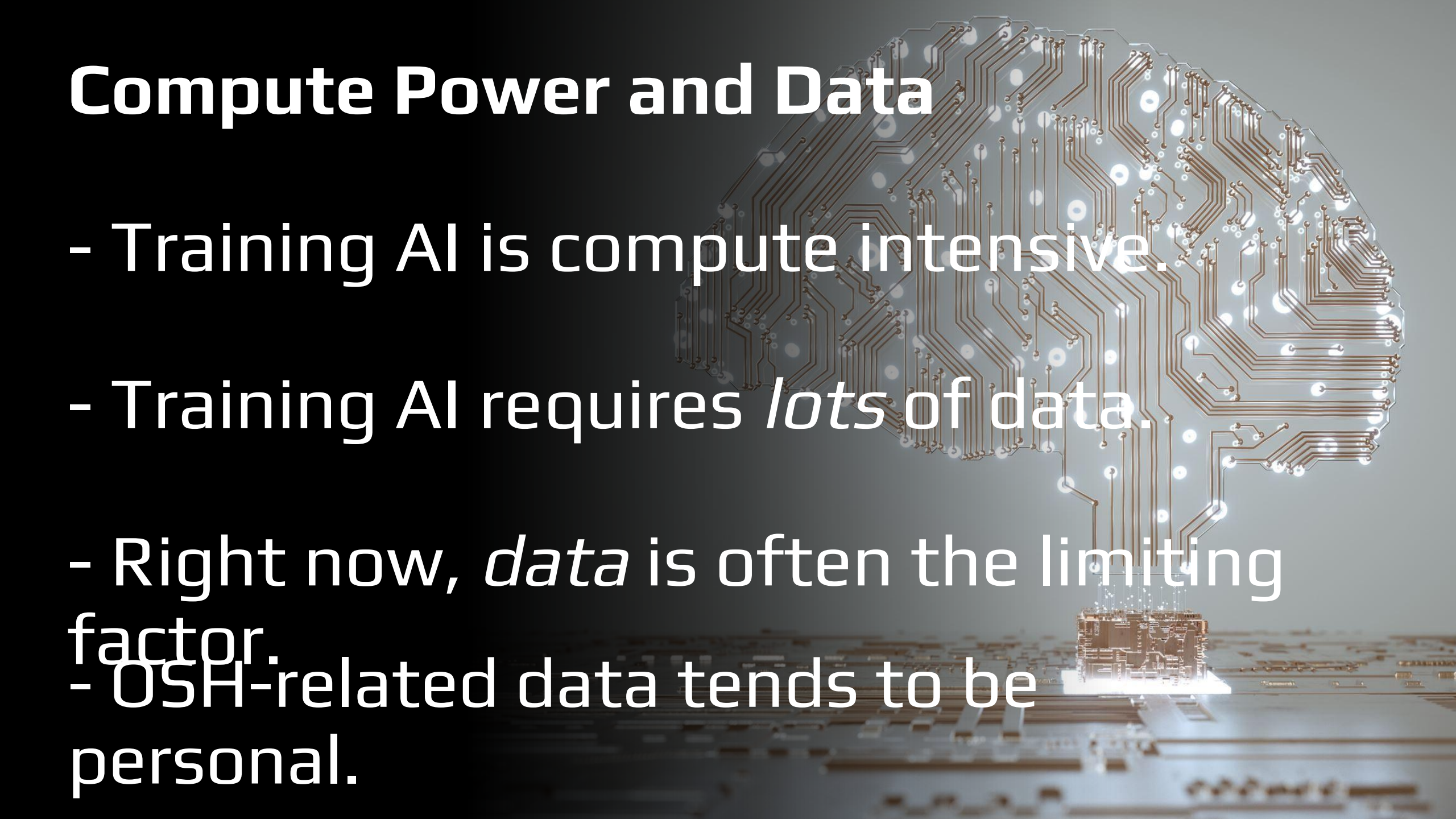
Compute Power and Data

- Training AI is compute intensive.

- Training AI requires *lots* of data.

- Right now, *data* is often the limiting factor.

- OSH-related data tends to be personal.



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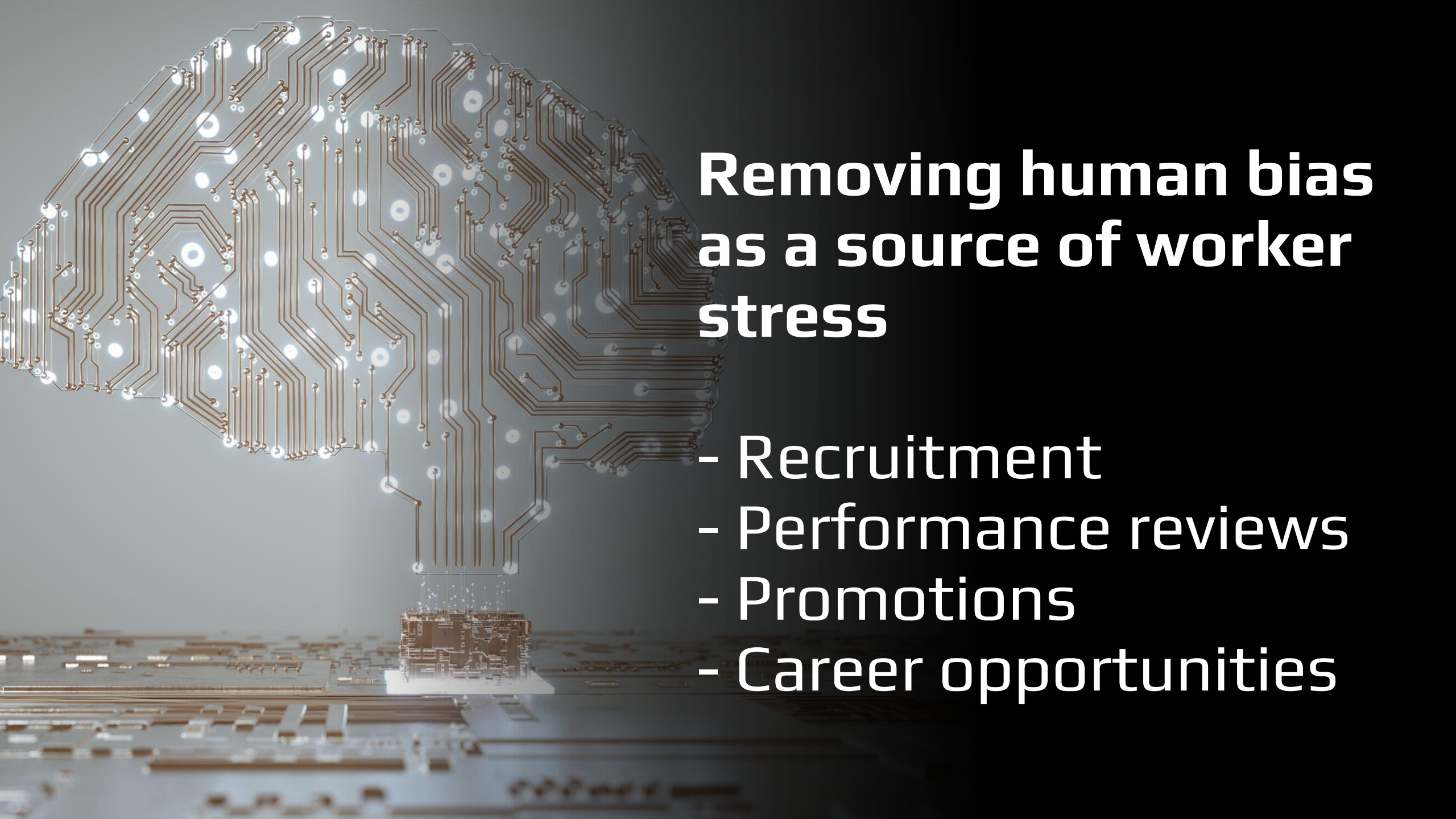
Use Case 1: People Analytics

Understanding workers through numbers and removing human bias: People Analytics

"The use of big data tools to measure, report and understand employee performance, aspects of workforce planning, talent management and operational management."

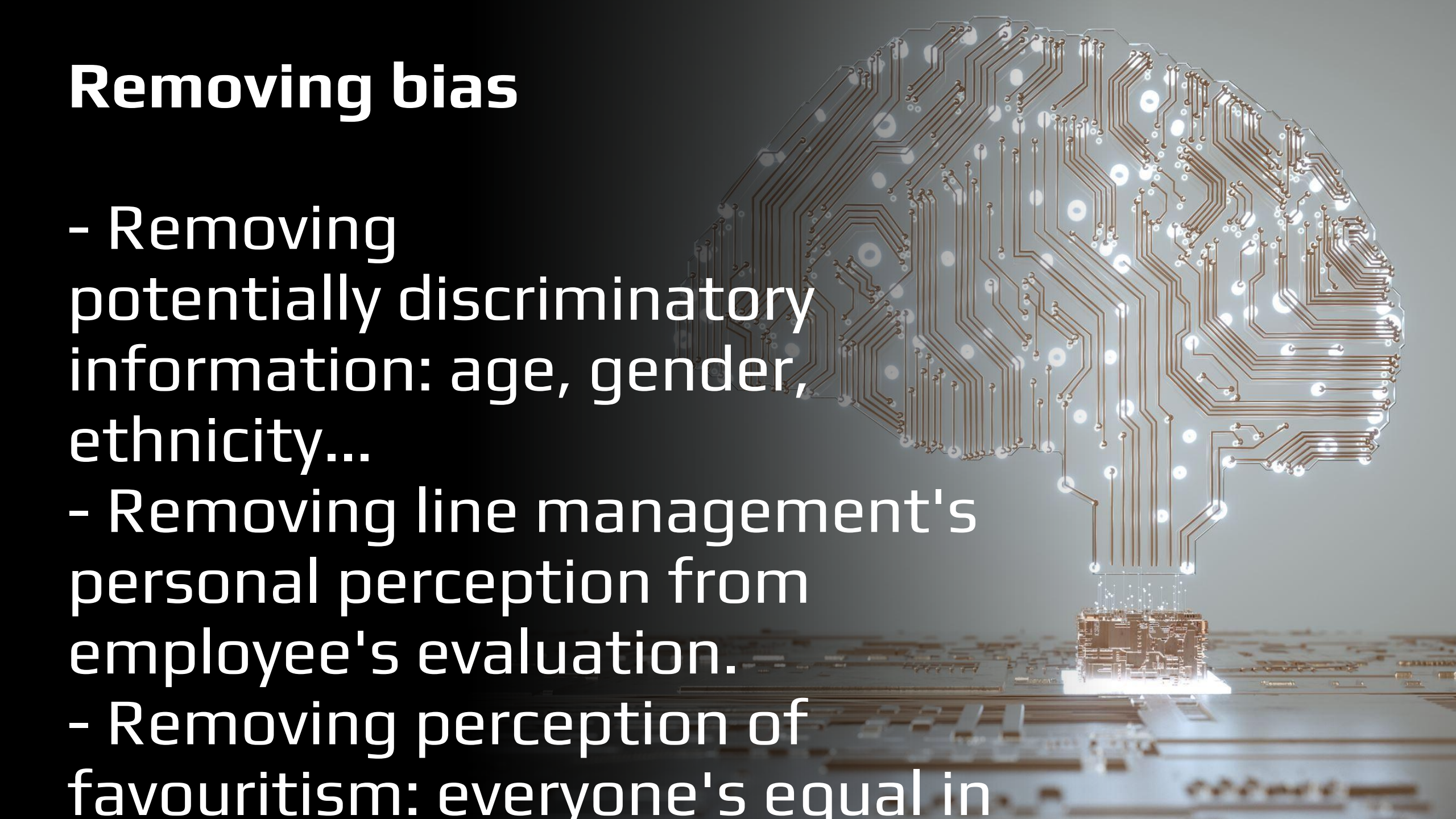
Qualifies as AI under EU law



Removing human bias as a source of worker stress

- Recruitment
- Performance reviews
- Promotions
- Career opportunities

Removing bias



- Removing potentially discriminatory information: age, gender, ethnicity...
- Removing line management's personal perception from employee's evaluation.
- Removing perception of favouritism: everyone's equal in

Removing Bias: the data

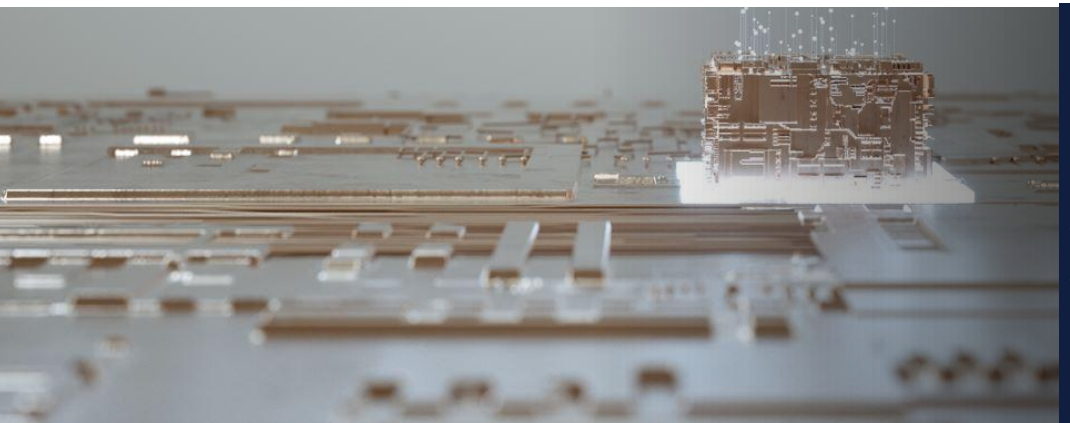
[redacted] algorithm shows prestigious job ads to men, but not to women. Here's why that should worry you.

July 6, 2015

3. Racial bias

All the images returned for terms such as "journalist", "reporter" or "correspondent" exclusively featured light-skinned people. This trend of assuming whiteness by default is evidence of racial hegemony built into the system.

Insight - [redacted] scraps secret AI recruiting tool that showed bias against women



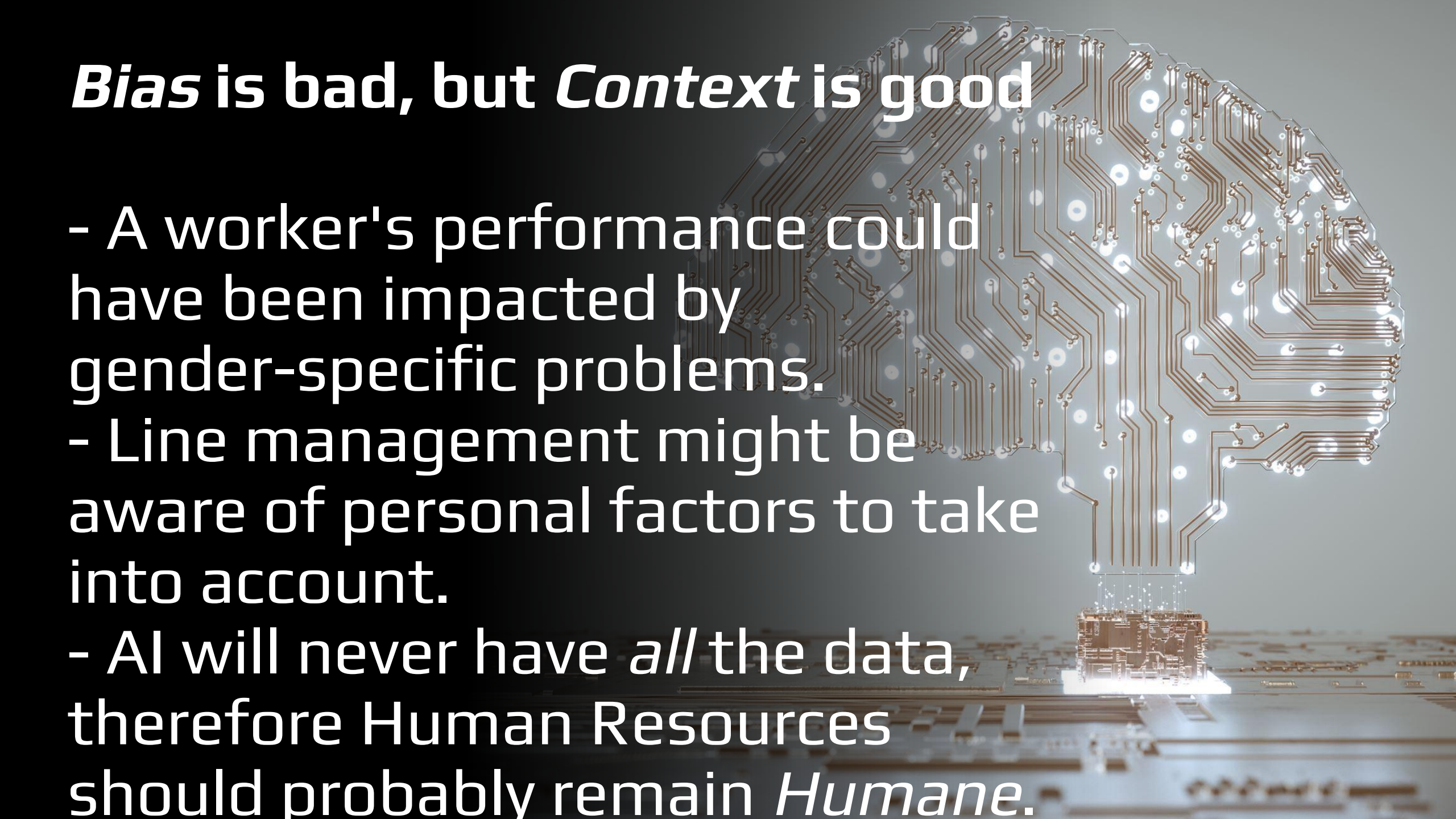
Predictive policing is still racist—whatever data it uses

Training algorithms on crime reports from victims rather than arrest data is said to make predictive tools less biased. It doesn't look like it does.

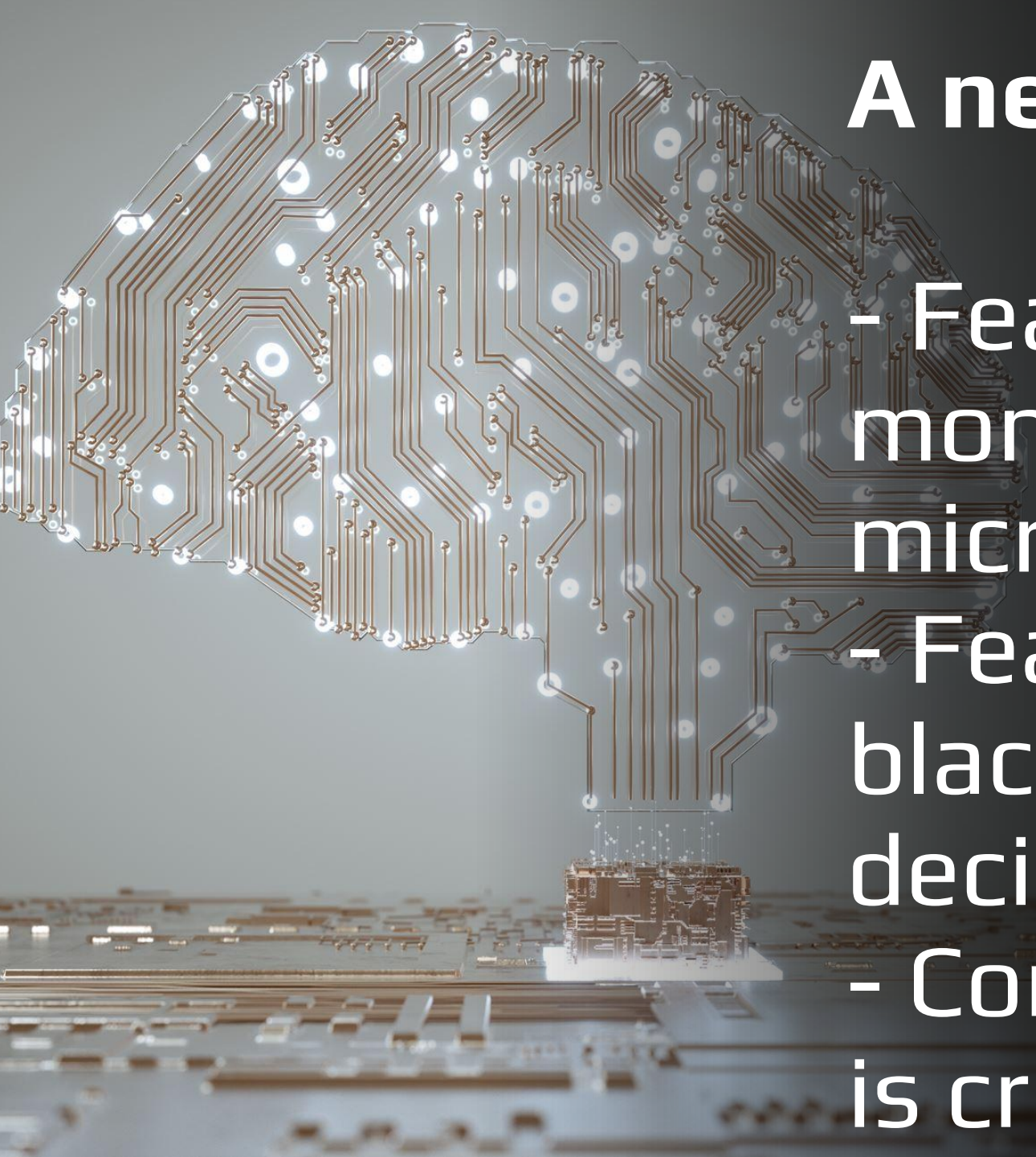
By Will Douglas Heaven

February 5, 2021

Bias **is bad, but** ***Context*** **is good**



- A worker's performance could have been impacted by gender-specific problems.
- Line management might be aware of personal factors to take into account.
- AI will never have *all* the data, therefore Human Resources should probably remain *Humane*.



A new source of stress

- Fear of monitoring/tracking and micro management
- Fear of the opaque black box making decisions.
- Consultation/Education is critical if we are to

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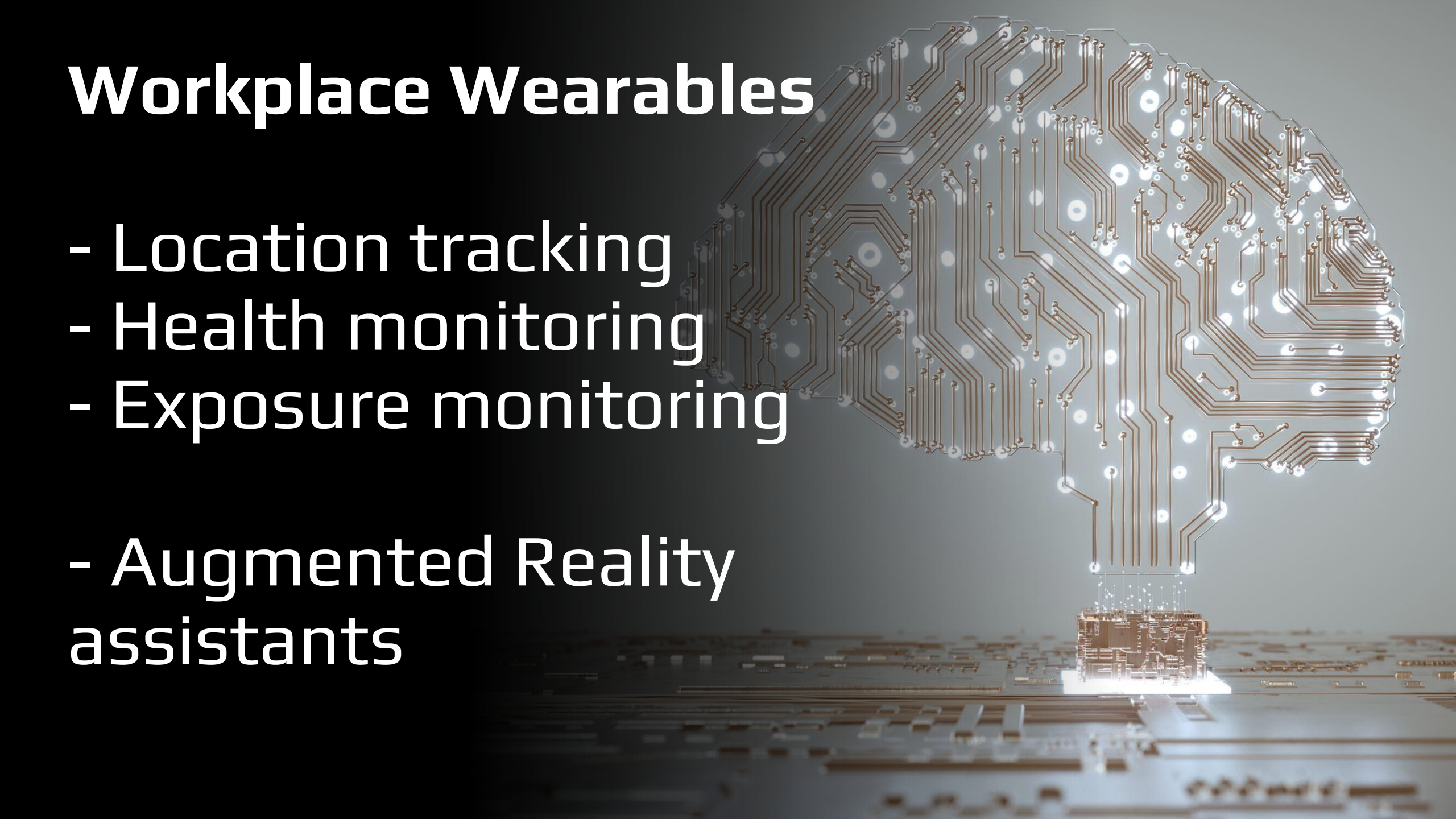
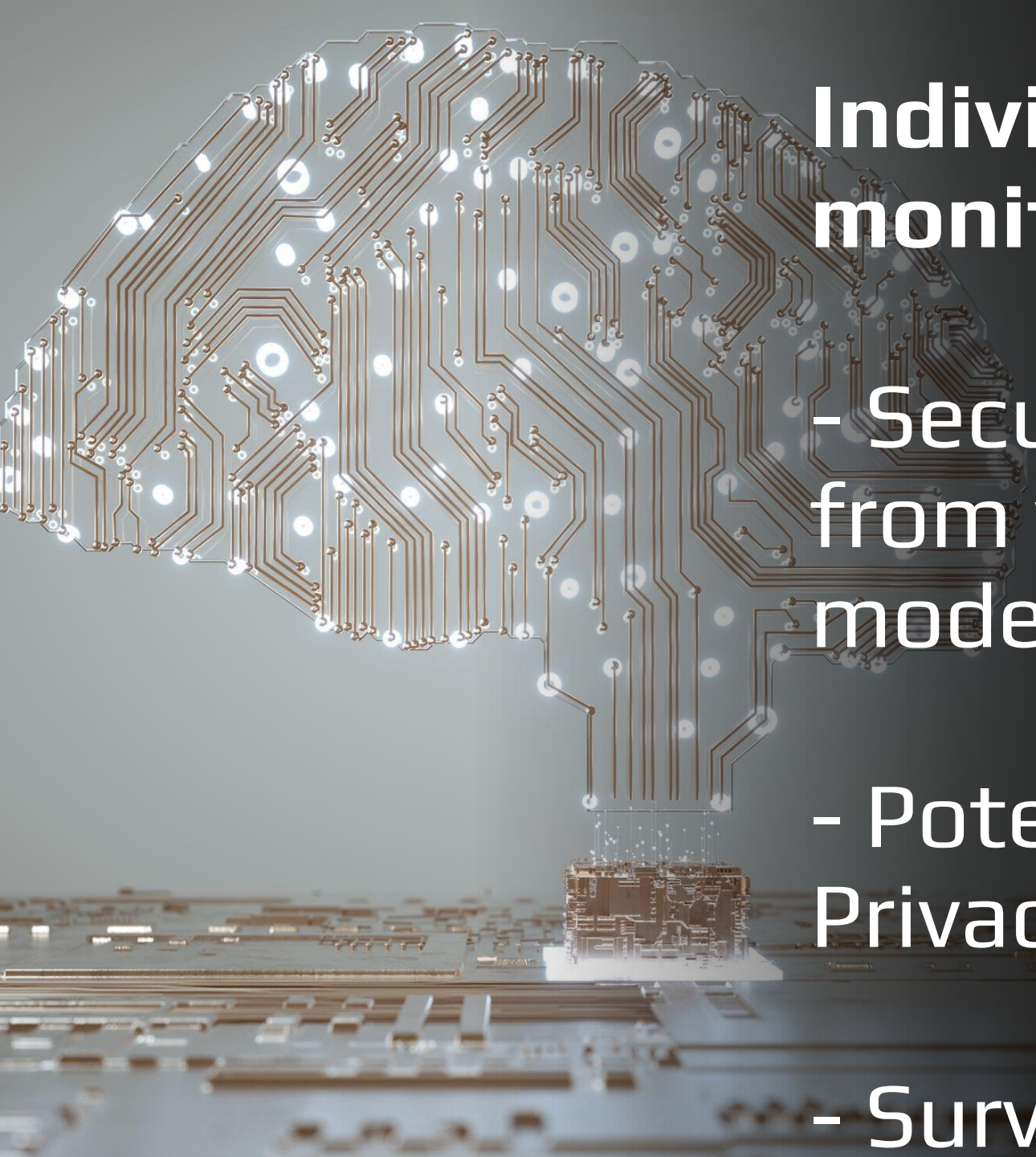
Use Case 2: Wearable Devices

Workplace Wearables

- Location tracking
- Health monitoring
- Exposure monitoring

- Augmented Reality assistants





Individual sensor monitoring

- Security/safety increase from worn sensors and AI models.

- Potential reduction in Privacy.

- Surveillance-related stress:

Improving safety

- Training data large and diverse enough to be reflective of working conditions and hazards?
- Model tuned to minimise the most costly errors? An exposure false negative is a life at risk...
- Model tolerance to sensor malfunction?

Reducing stress

- Training data storage and anonymisation.

- GDPR compliance: *purpose* of data collection.

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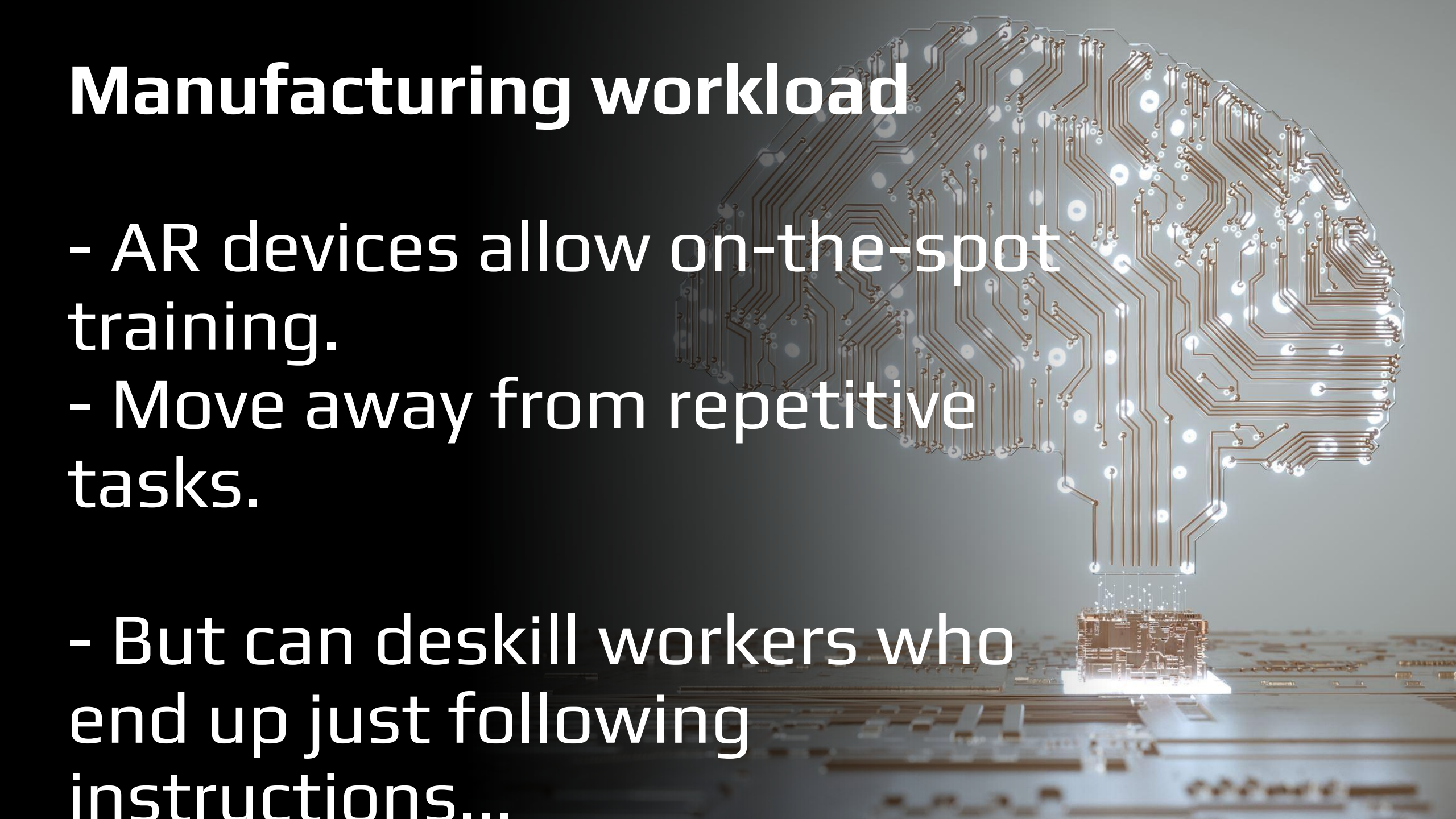
Manufacturing workload

- AR devices allow on-the-spot training.
- Move away from repetitive tasks.

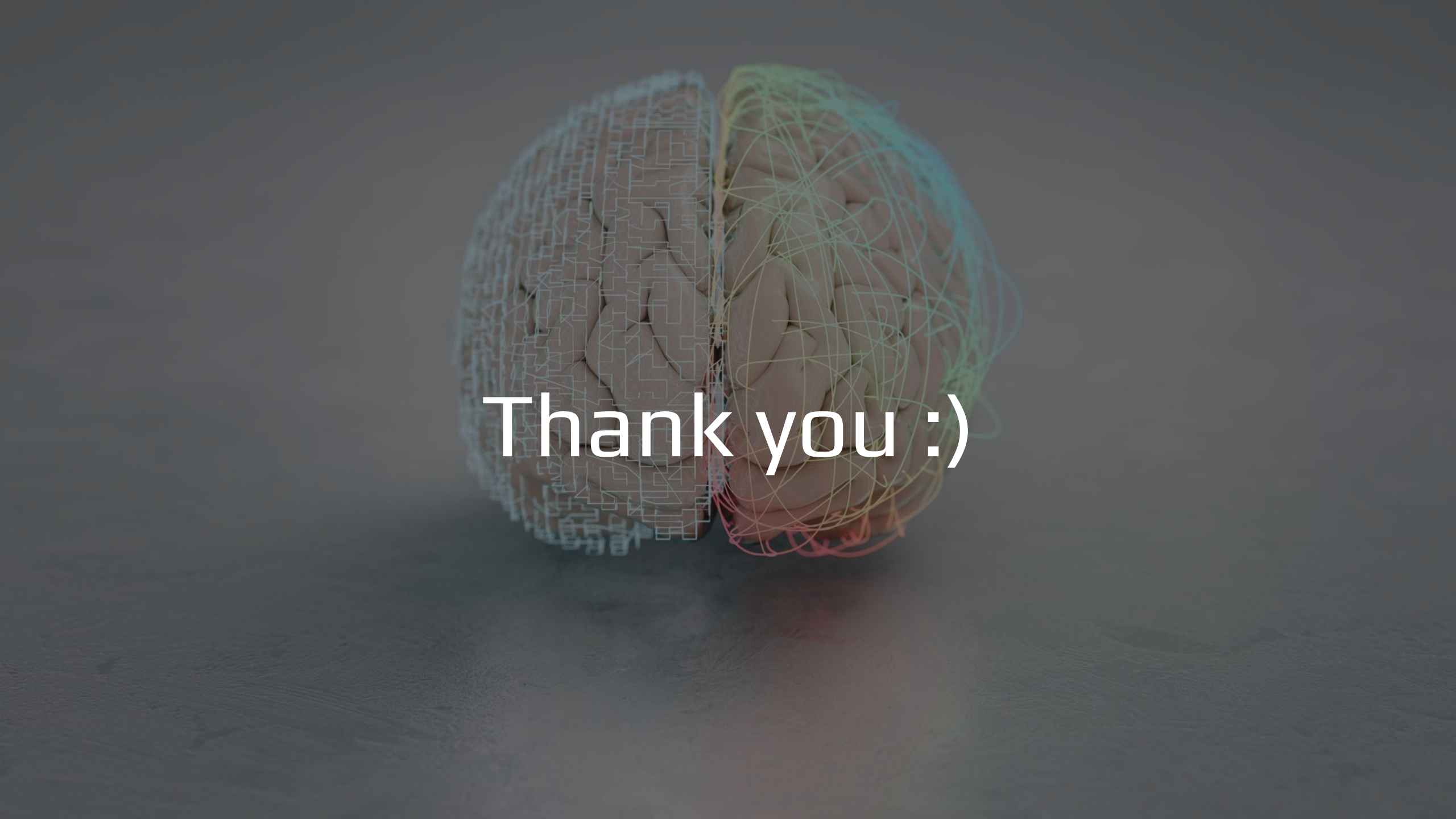
- But can deskill workers who end up just following instructions...




In summary...

It is not AI technology that creates risks for safety and health of workers: it is the way we choose to implement it.

High quality data, respect of privacy and worker consultation/education will be key.


Thank you :)