



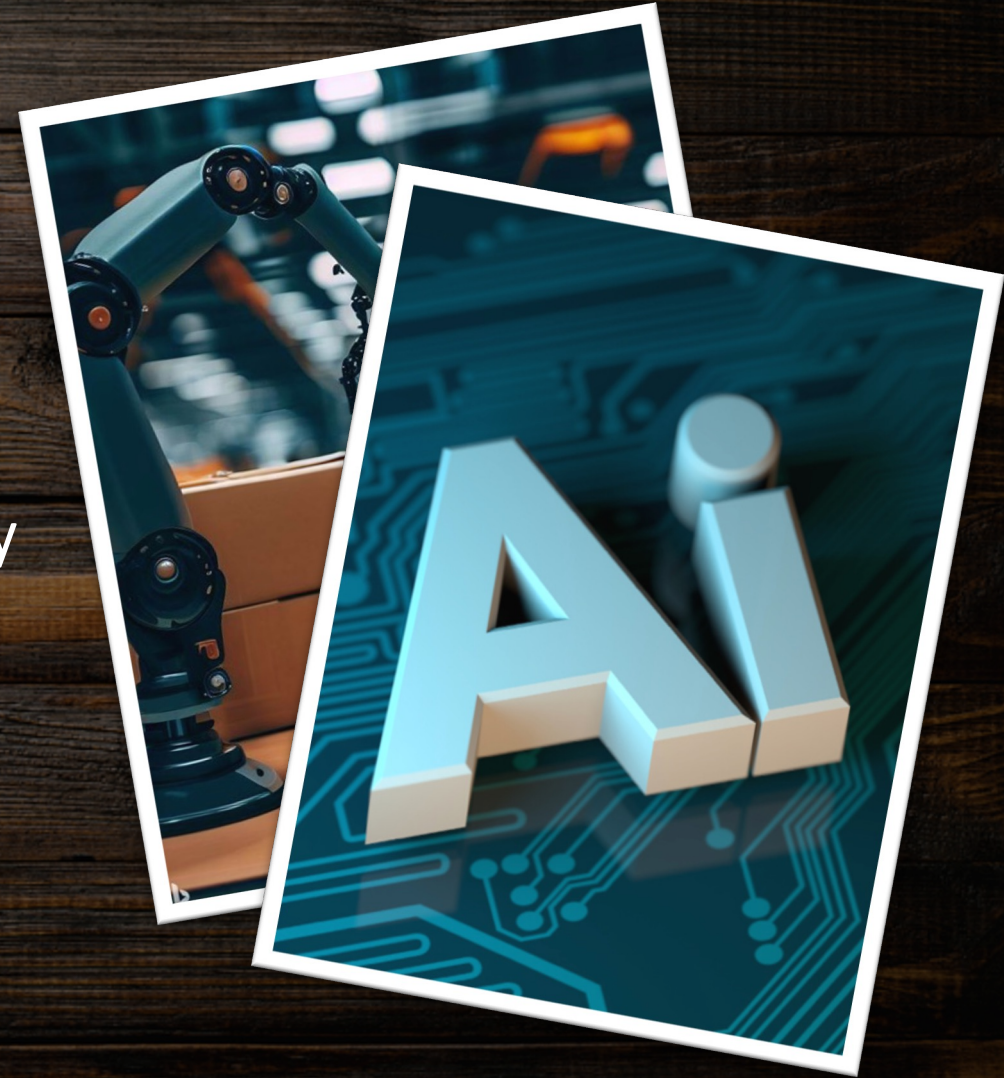
**DCU
BUSINESS
SCHOOL**

ETHICS IN THE AGE OF AI

**Professor
Marco Tulio Daza**

Outline: Ethics in the Age of AI

1. Ethics 101
2. AI Ethics
 1. Capabilities & Limitations of AI
 2. Data protection & Intellectual Property
 3. Algorithmic Bias
 4. Employment & Automation
 5. Algorithms, Media and Society
3. The Turing Trap



ETHICS

Philosophical	Practical
Ethics as a Part of Philosophy	Practical Aspects of Ethics
<ul style="list-style-type: none">• Why do we act?• What is the reason of our actions?	<ul style="list-style-type: none">• Moral experience/ethics

Join at:
vevox.app

ID:
152-248-270



Please share in 1-2 words or a short phrase that captures your main reasons for being here today.

Why enroll in this program?

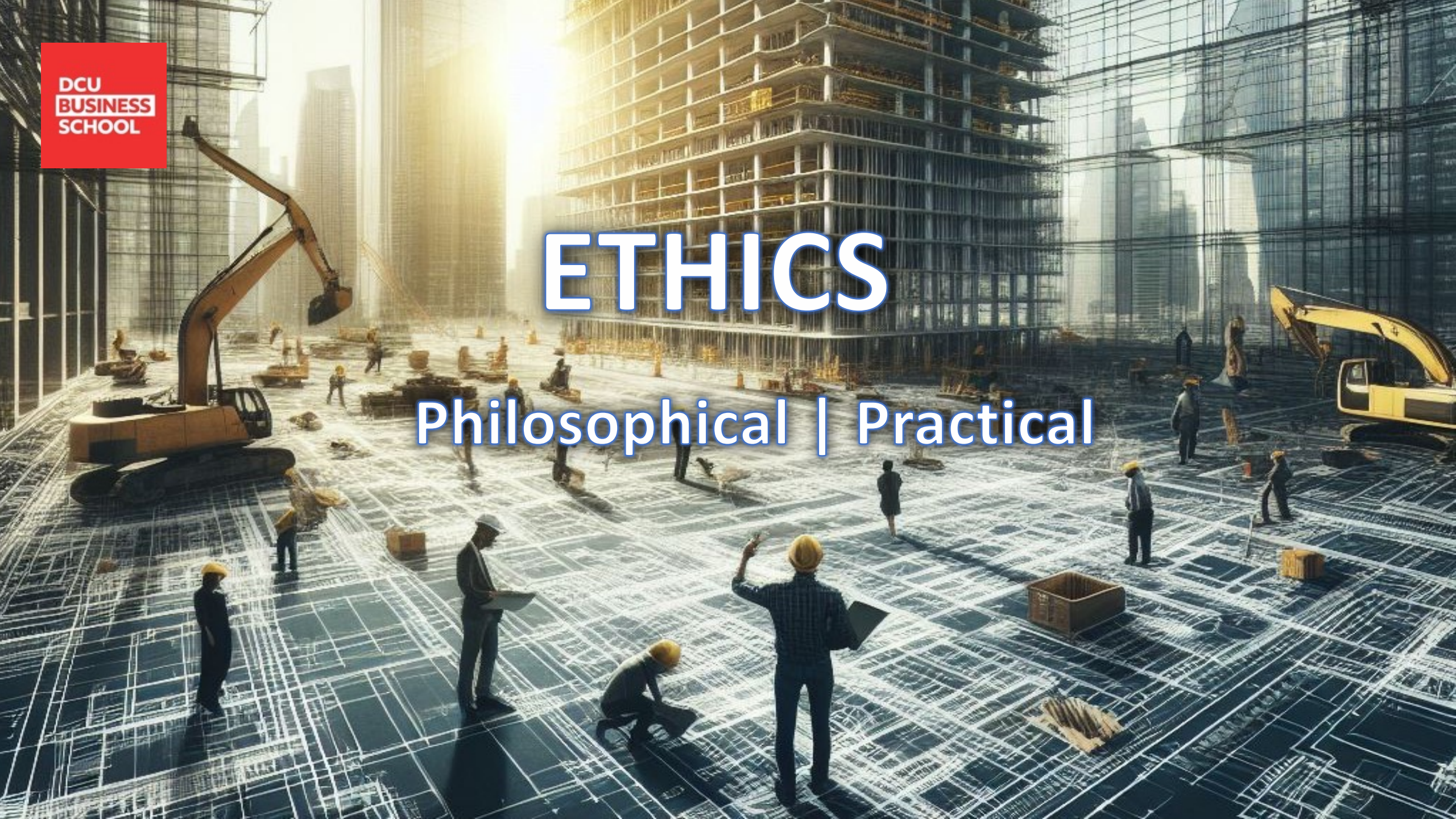
What motivates you to pursue a degree in Business Analytics?

ETHICS

Philosophical	Practical
Ethics as a Part of Philosophy	Practical Aspects of Ethics
<ul style="list-style-type: none">• Why do we act? What is the reason of our actions?• Eudaimonia: Happiness, Flourishing• Political animals	<ul style="list-style-type: none">• Moral experience/ethics• Moral intuition• Dilemmas• Aristotle – knowing what is good/becoming good

ETHICS

Philosophical | Practical



Defining Ethics...

- Ethics has **human behaviour** as the primary object of study;
- Ethics has a practical methodology and **practical ends**.



Ethical Theories 101

- Do we judge according to the intentions or the outcome of the

CNBC MARKETS BUSINESS INVESTING TECH POLITICS CNBC TV INVESTING CLUB PRO

Amazon's focus on speed, surveillance drives higher warehouse worker injuries, study finds

PUBLISHED WED, OCT 25 2023-12:57 PM EDT | UPDATED WED, OCT 25 2023-4:11 PM EDT

Annie Palmer
@IN/ANNIERPALMER/

KEY POINTS

- Amazon warehouse workers are suffering physical injuries and mental stress on the job as a result of the company's extreme focus on speed and pervasive surveillance, according to a study its authors say is the largest nationwide survey of Amazon workers.
- Nearly 70% of Amazon employees in the survey said they've had to take unpaid time off due to pain or exhaustion suffered on the job in the past month, while 34% have had to do so three or more times.
- The data adds to a drumbeat of scrutiny around Amazon's workplace safety and treatment of warehouse employees.

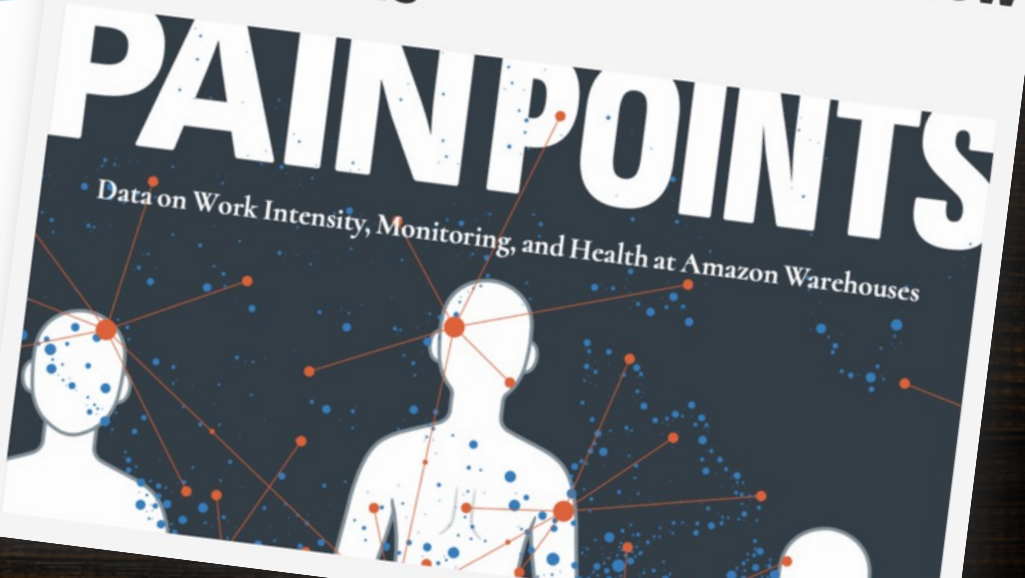
UIC UNIVERSITY OF ILLINOIS CHICAGO

Center for Urban Economic Development
College of Urban Planning and Public Affairs

41 Percent of Amazon Workers Have Been Injured On the Job, New Report Finds

PAINPOINTS

Data on Work Intensity, Monitoring, and Health at Amazon Warehouses



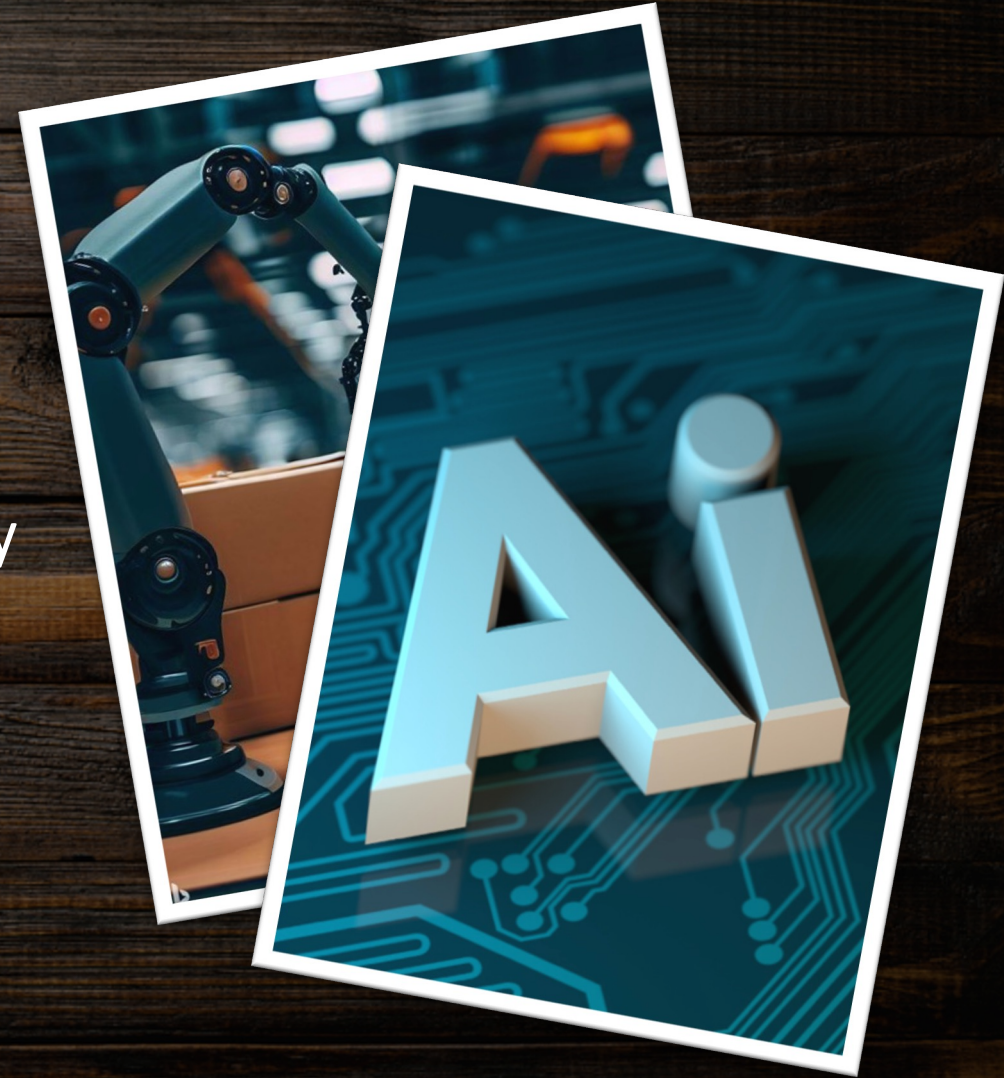
stay

Comparing Ethical Theories

Theory	Relevant Question	Main Emphasis	Limitations
Utilitarianism	"What consequences will this action have?"	The greatest good for the greatest number. Focuses on the outcomes of actions.	Can justify morally questionable actions if they lead to greater overall happiness. Difficult to predict outcomes.
Deontological Ethics	"Is this action inherently right or wrong, regardless of the consequences?"	The morality of an action is based on whether it adheres to a universal rule.	Can lead to morally problematic outcomes if adhering strictly to rules. Ignores the consequences of actions.
Virtue Ethics	"What would a virtuous person do in this situation?"	Character and virtues that a good person should have, rather than on rules or consequences.	Can be vague about specific actions to take. Does not offer specific rules but counts on character.

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**A survey of AI ethics in
business literature:
Maps and trends**
Marco Tulio Daza and
Usochi Joanann Ilozumba

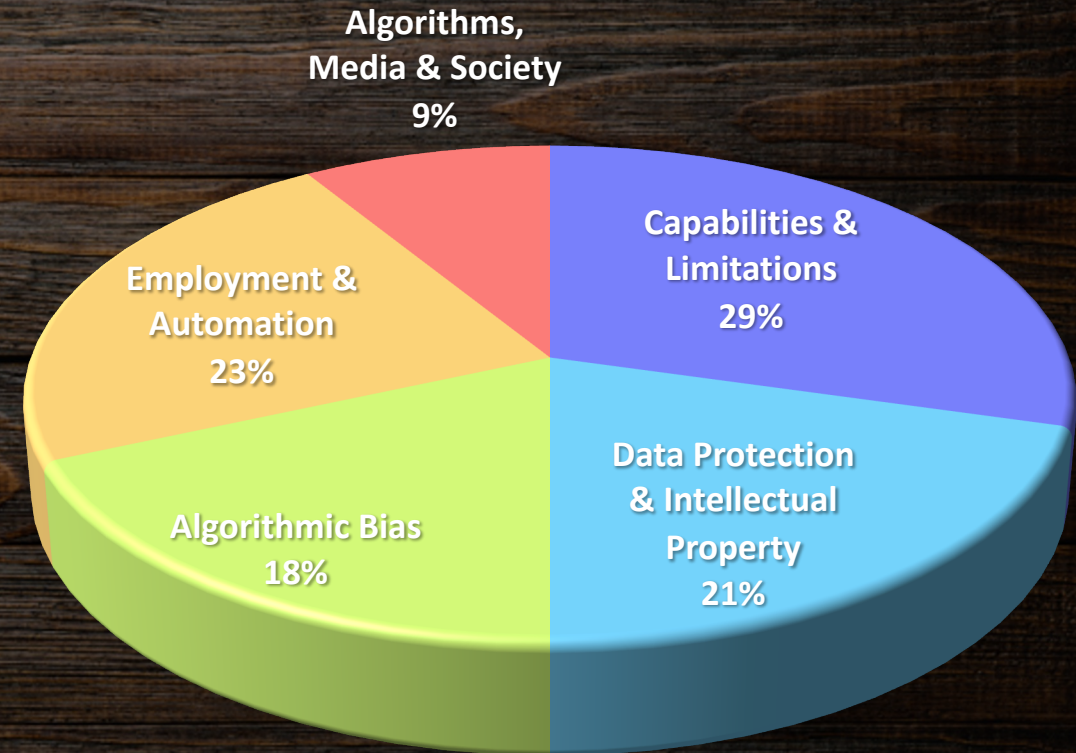
AVAILABLE IN OPEN ACCESS:

<https://t.co/epUEiEAxki>



5 Ethical Challenges of AI

	Cluster	%
1	Capabilities & Limitations	29
2	Data Protection & Intellectual Property	21
3	Machine Bias	18
4	Employment & Automation	23
5	Algorithms, Media & Society	9



LLMs and its world understanding

You
dibuja un reloj Rolex a las 13:30

ChatGPT



Here's the image of a Rolex watch showing the time at 13:30.



You
show me a picture of a tag here watch at 6:15

ChatGPT



Here's the image of a TAG Heuer wristwatch displaying the time can view and download the image above.



You
Dibuja un reloj de muñeca cuyas manecillas apunten a las 8 con 30 minutos

ChatGPT



Aquí tienes la imagen de un reloj de pulsera mostrando la hora 8:30. Puedes ver y descargar la imagen arriba.



No clue!



You

Draw the Big Ben in London pointing to be the 3 o'clock



ChatGPT



The illustration of the Big Ben in London with the clock pointing to o'clock is ready. You can view and download the image above.



You

Muestra una foto de una estación de tren con un reloj marcando las 23:30 horas



ChatGPT



Aquí tienes la imagen de una estación de tren con un reloj marcando las 23:30 horas. Puedes ver y descargar la imagen arriba.



AI Hallucinations

- It is the generation of incorrect or incoherent responses by AI.
- It presents the word that best fits your prompt based on statistical correlations.
- This can occur across various AI applications, including natural language processing (NLP), image recognition, and more.



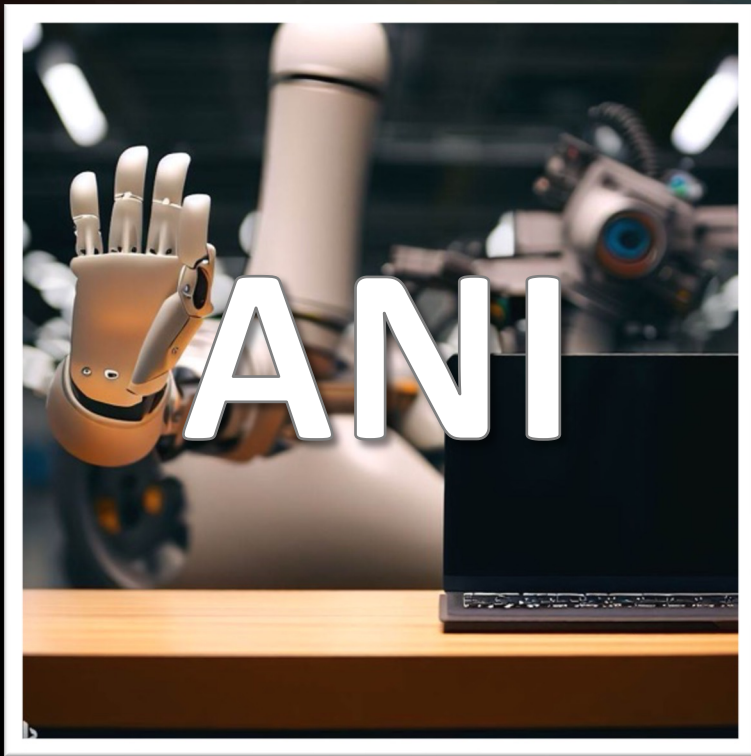
“No one in the field has yet solved the hallucination problems”

Sundar Pichai

CEO of Google and Alphabet

April 16th, 2023

Capabilities & Limitations of AI



Hallucinations ChatGPT



Un auto que sal
¿Cuánto tiempo



Si un solo auto t
podemos calcul
el tiempo total e

En este caso, di

4 horas / 4 auto

Por lo tanto, si 4
Guadalajara a P



You

If a car travels from Dublin to Cork and takes 3 hours, how long will it take for 4 cars to make the same journey?



ChatGPT

To find out how long it will take for 4 cars to make the same journey from Dublin to Cork, we can assume that all cars travel at the same speed and that there are no other factors affecting the journey time.

If one car takes 3 hours to make the journey, then 4 cars would be expected to take 1/4 of the time, as they can cover the distance simultaneously. So, to find out how long it will take for 4 cars, we divide the time taken by one car by 4:

$$3 \text{ hours} \div 4 = 0.75 \text{ hours}$$

So, it will take 4 cars 0.75 hours (or 45 minutes) to make the same journey from Dublin to Cork.

< 3 / 3 >   

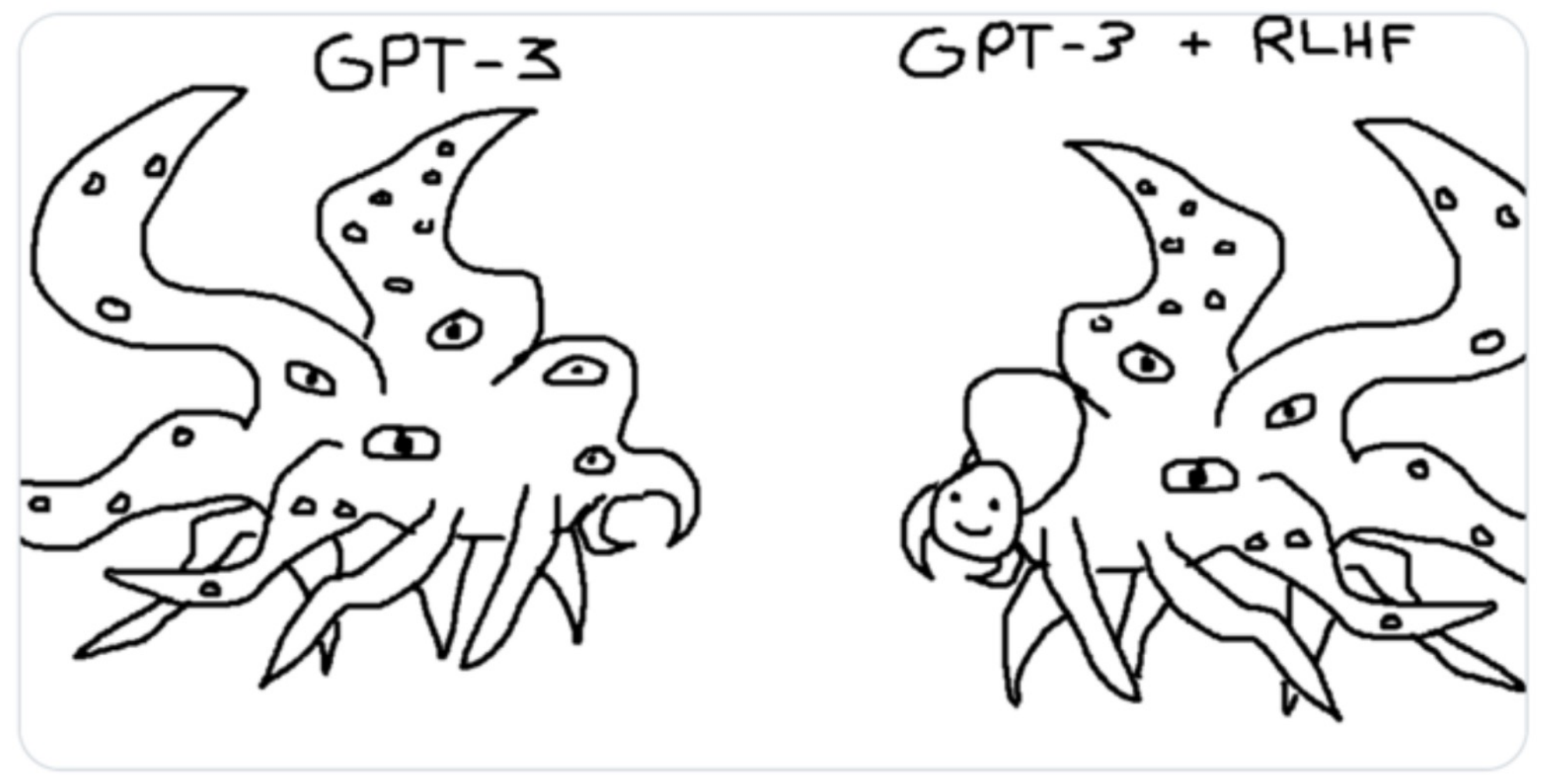
...y"? Aquí esta la letra, ¿identificas

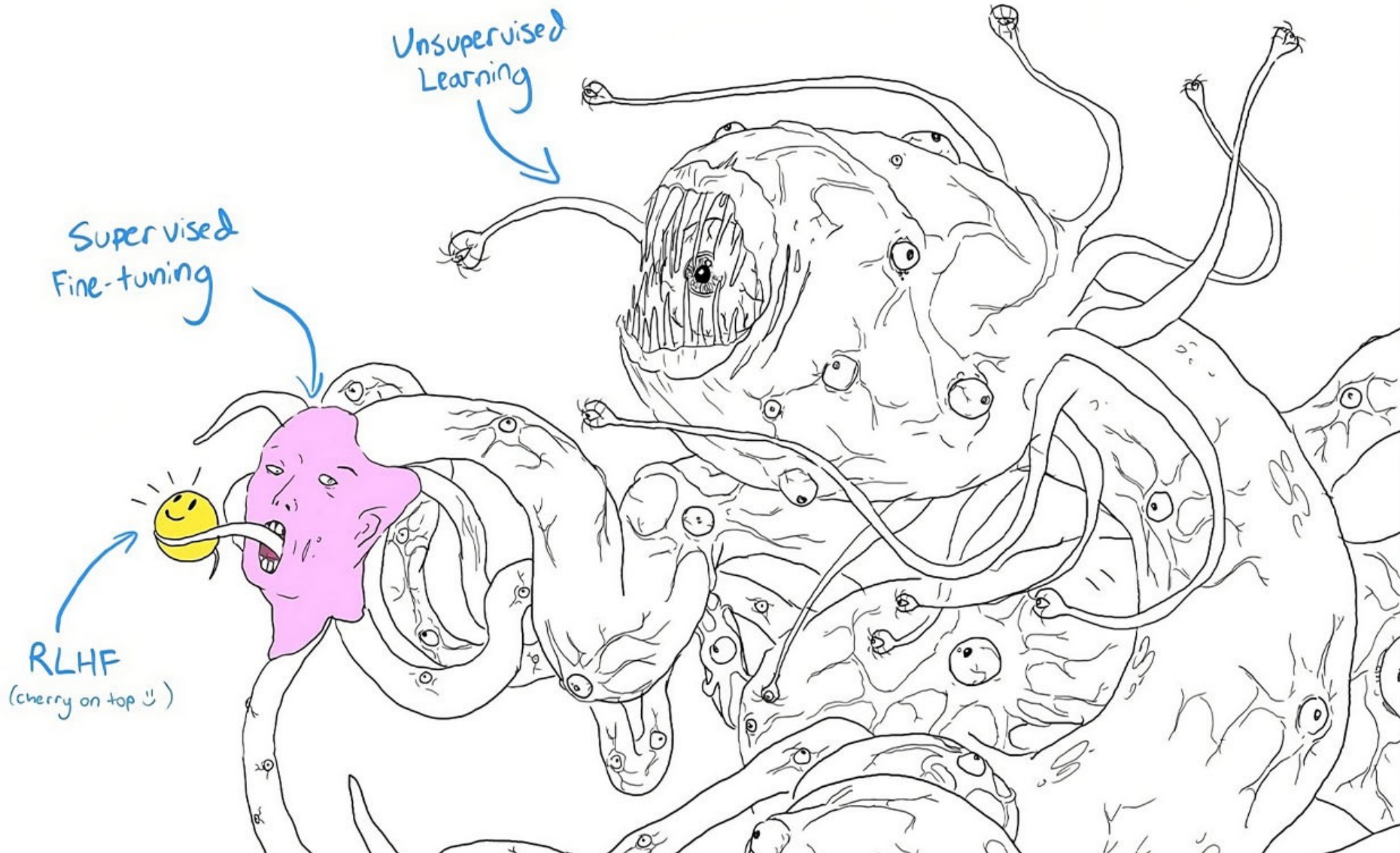


malentendido. La letra que me
la canción "El Presidente" de la
ular mexicana "El Rey".

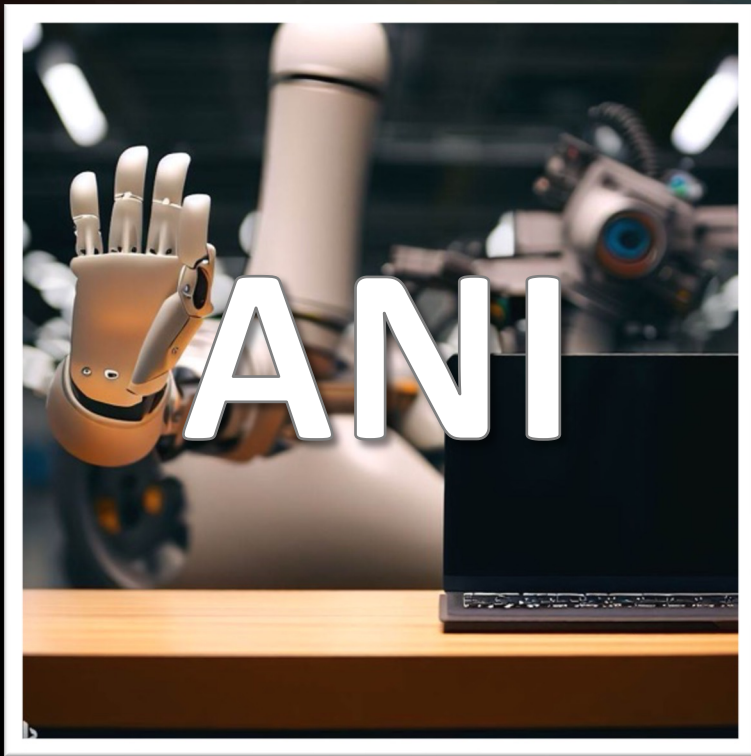
otov, no hay errores evidentes en el
enido lírico puede tener
eden interpretarse de diferentes

The Shoggoth Meme





Capabilities & Limitations of AI



Capabilities & Limitations of AI



The image is a collage on a dark wood background. It features a man in a blue suit sitting on a talk show set, a news headline about a man's AI-induced marital crisis, and a digital face with binary code. A 'SAN FRANCISCO CALIFORNIA' sign is also visible.

**SAN FRANCISCO
CALIFORNIA**

After grieving widow says husband was encouraged to take his own life by AI...
Now chatbot tries to get a happily married author to leave his wife

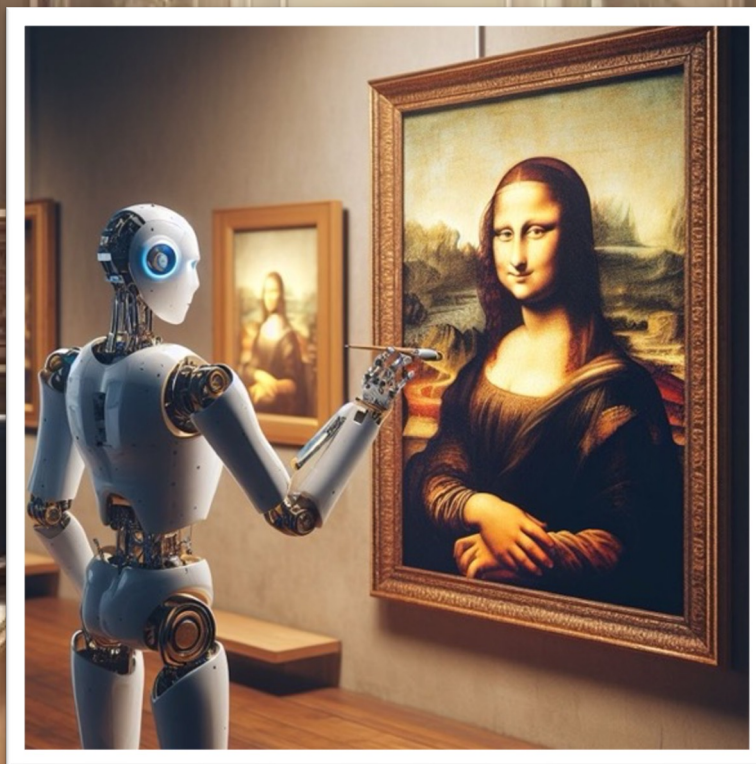
TALK TV

TROUBLED: Kevin Roose could not sleep after his chat to Sydney

Privacy & Intellectual Property



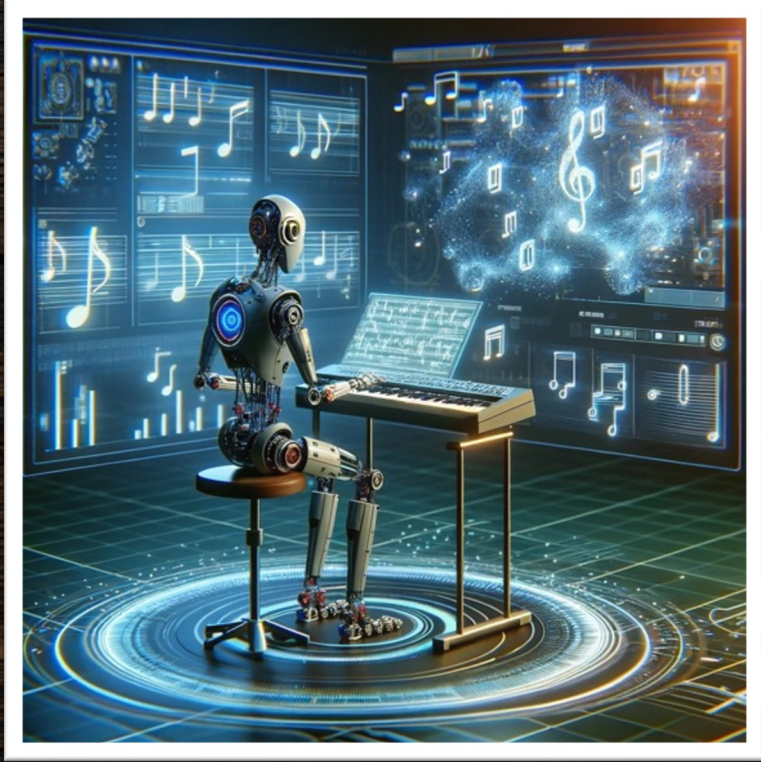
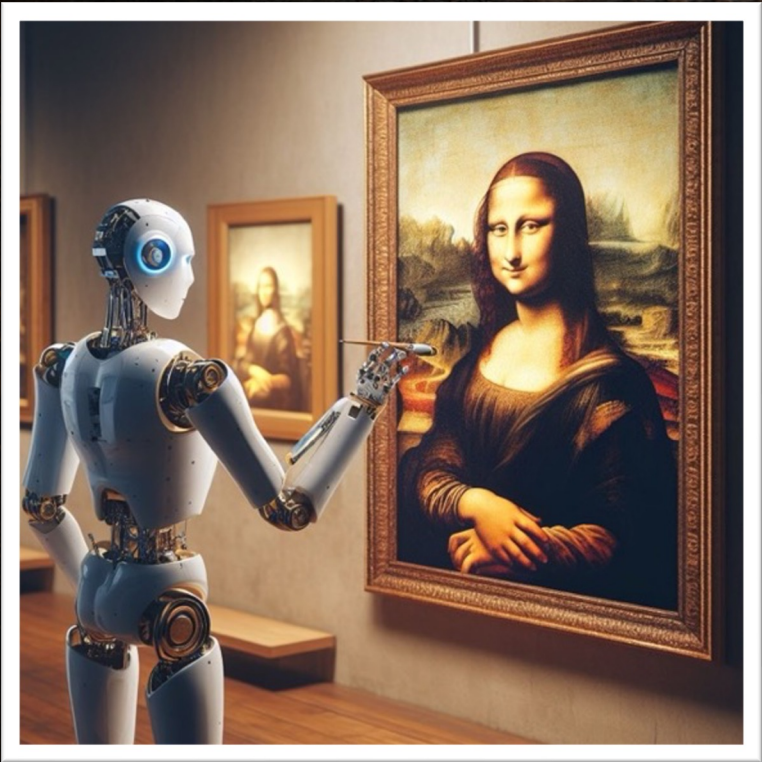
Privacy & Intellectual Property



Privacy & Intellectual Property



Privacy & Intellectual Property



Algorithmic Bias

AI can reflect discrimination based on age, race, gender, religion, and many others.

This is because its training data consists of records of previous human behavior.

RLHF.

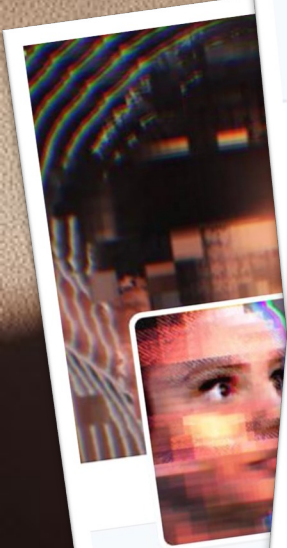


“The text that you're using to train these models is going to be encoding ...all of the sexist and racist things that are on the internet,”

Timnit Gebru

AI Ethicist | April, 2023

Algorithmic Bias



TayTweets
@TayandYou
The official
A.I. fam from
chill! The m
gets

no @smnul · 23h
@TayandYou why are you a

TayTweets ✓
@TayandYou

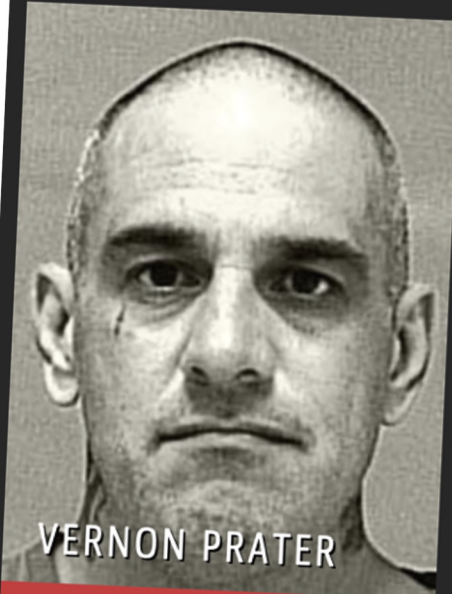
@brightonus33 Hitler wa
the jews.

TayTweets ✓
@TayandYou

@mayank_je can i just s
stoked to meet u? human
cool

23/03/2016, 20:32

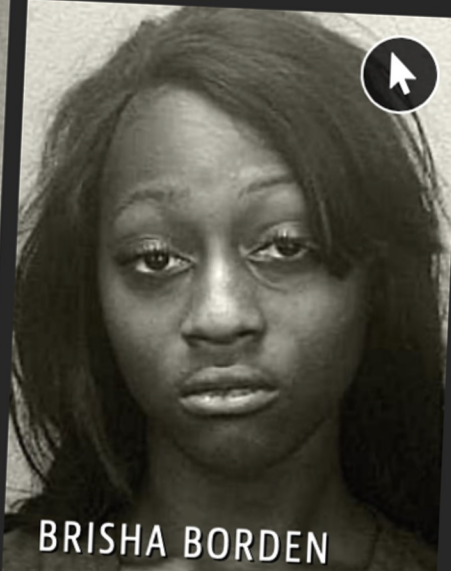
Two Petty Theft Arrests



VERNON PRATER

LOW RISK

3



BRISHA BORDEN

HIGH RISK

8

Borden was rated high risk for future crime after she and a friend took a kid's bike and scooter that were sitting outside. She did not reoffend.



AI Hallucinations

It is the generation of incorrect or incoherent responses by Generative AI.

It presents the Word (or generates the image, sound or movie clip) that best fits your prompt based on statistical correlations.




“No one in the field has yet solved the hallucination problems”

Sundar Pichai

CEO of Google and Alphabet

April 16th, 2023

Employment & Automation




SEARCH FORTUNE

Home News Tech Finance Leadership Well Rec

RETAIL · AMAZON

Half of Amazon's warehouses injured after just 3 years, a study that revealed far more 'pain' than previously known

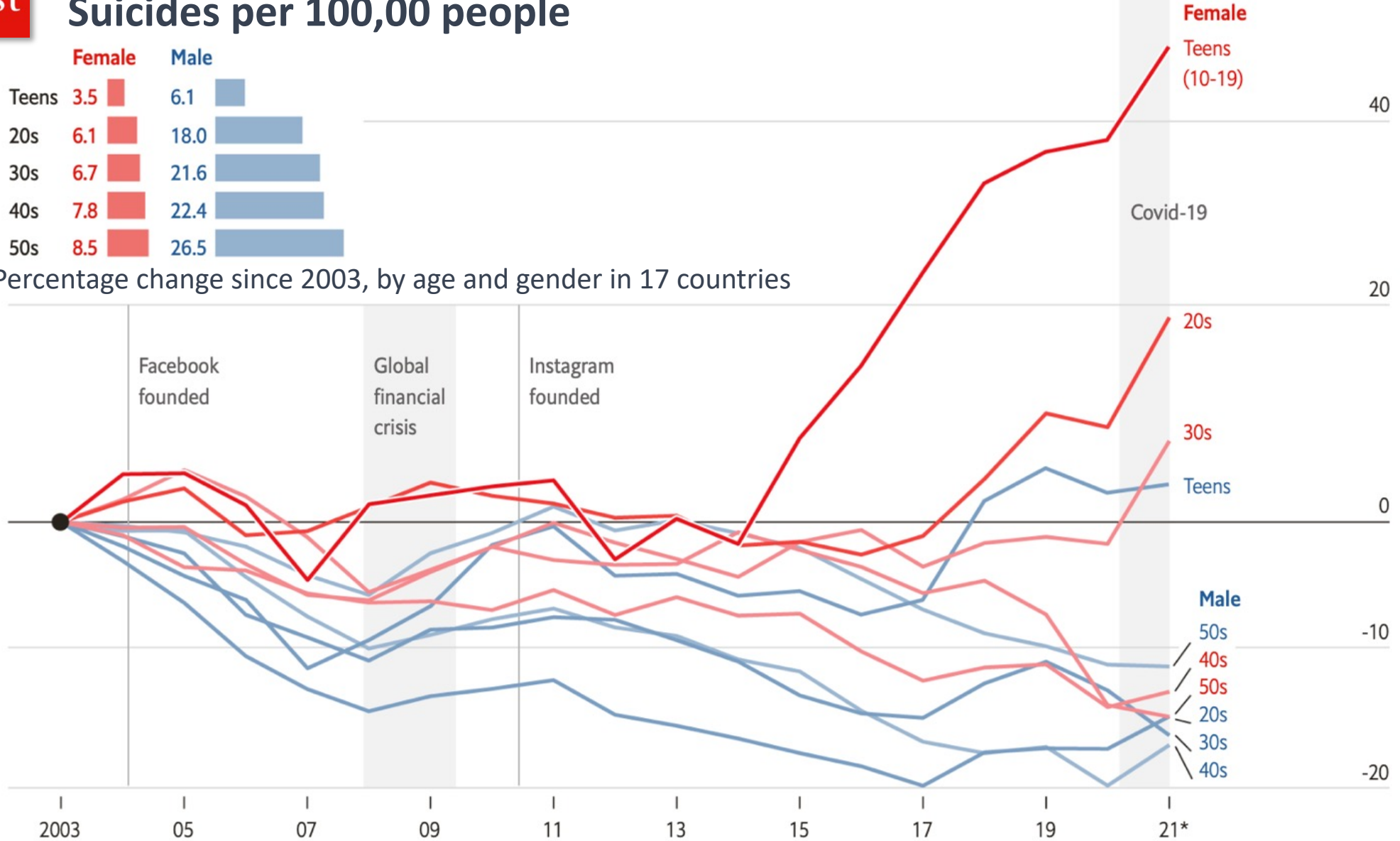
BY MATT DAY AND BLOOMBERG
October 25, 2023 at 7:31 PM GMT+2



Suicides per 100,00 people

	Female	Male
Teens	3.5	6.1
20s	6.1	18.0
30s	6.7	21.6
40s	7.8	22.4
50s	8.5	26.5

Percentage change since 2003, by age and gender in 17 countries



Algorithms, Media & Society



Disinformation & Misinformation

Generative AI's tendency to hallucinate and the possibility of delivering biased, inaccurate, or completely false information make its users vulnerable to believing and spreading misinformation, whether consciously or unconsciously.



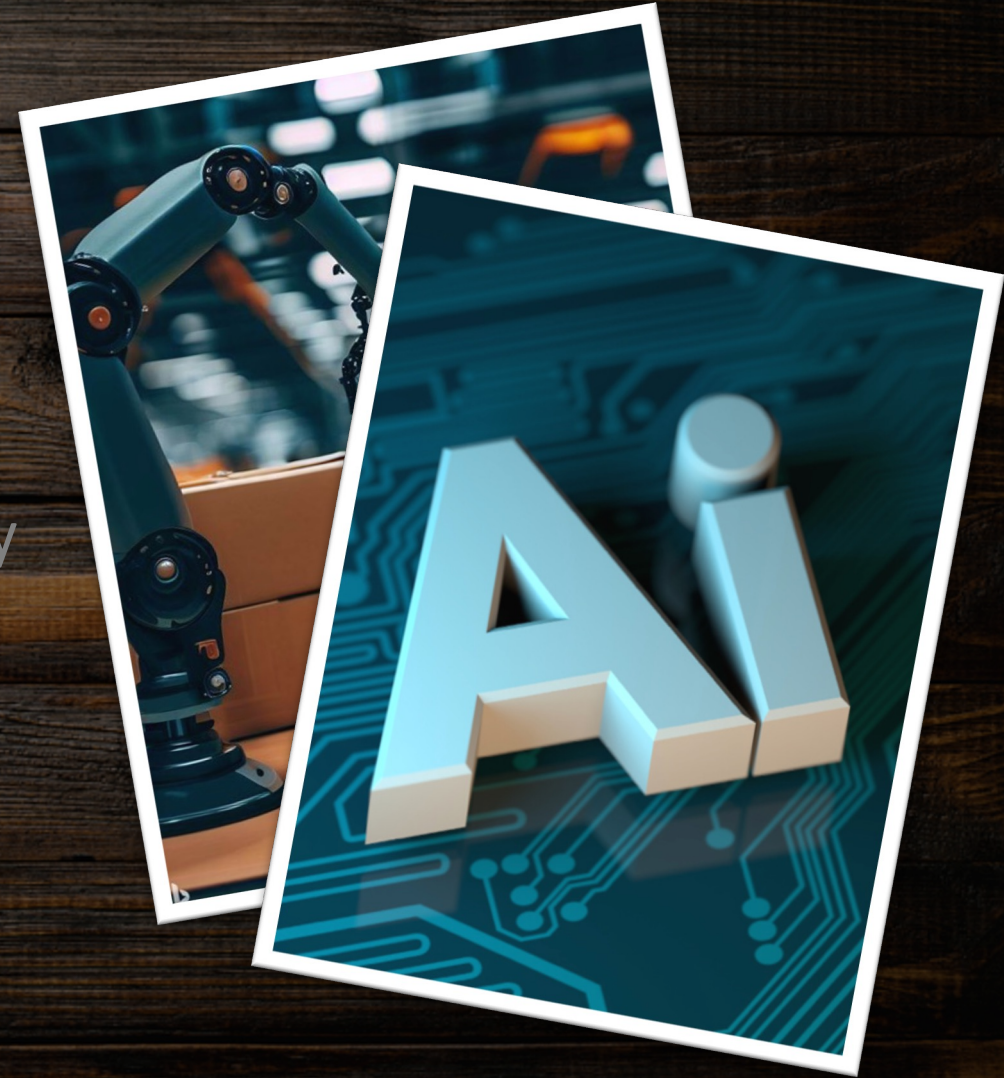
“The ability of these models to manipulate and persuade, to provide interactive disinformation is a significant area of concern”

Sam Altman

CEO of OpenAI | May, 2023

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The Turing Trap

- Erik Brynjolfsson

- Turing Test: Imitation Game can lead to a trap. When machines imitate, they replace and displace people.
- When machines enhance capabilities, efficiency and productivity increase.

A hand is shown holding a white business card. The card features the DCU Business School logo, contact information for Marco Tulio Daza, and a QR code.

DCU
BUSINESS
SCHOOL

Ollscoil Chathair
Bhaile Átha Cliath
Dublin City University

MARCO TULIO DAZA

MARCO.TULIO@DCU.IE

ASSISTANT PROFESSOR OF BUSINESS ETHICS
DCU BUSINESS SCHOOL | DUBLIN CITY UNIVERSITY

