ADAPT Engaging Content Engaging People

#Discuss AI

AI IN MY LIFE

A World Leading SFI Research Centre

Science Foundation Ireland sfi For what's next

AI and Ethics

HOST INSTITUTION

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

HOST INSTITUTION

DCU

PARTNER INSTITUTIONS

TU Dublin

University College Dublin
An Coláiste Ollscoile, Baile Átha Cliath
Ireland's Global University

MTU
Ollscoil Teicneolaíochta na Mumhan
Munster Technological University

TUS

Maynooth University
National University of Ireland Maynooth

Ollscoil na Gaillimhe
University of Galway

What is AI in My Life?

AI IN MY LIFE

- Workshop series on Artificial Intelligence
- Developed by ADAPT research centre and partners
- Designed to help students navigate the 'Age of AI'

Our Partners:

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

What you'll learn today

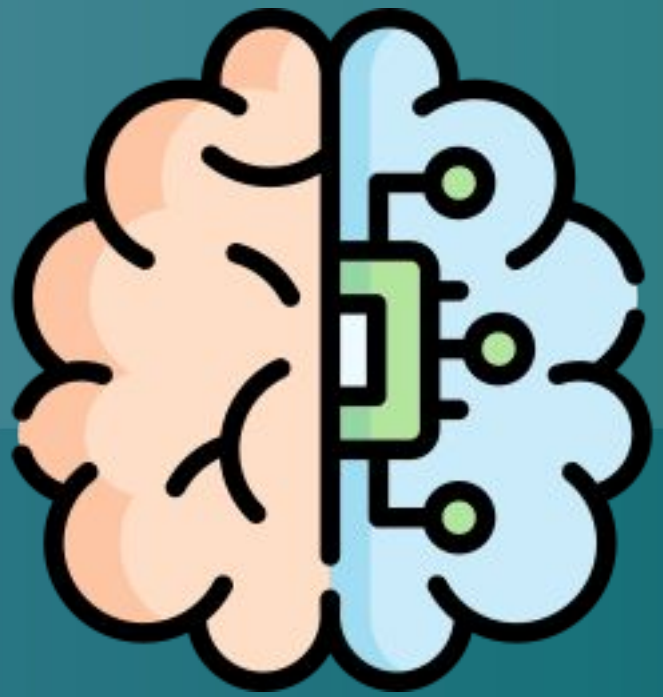
ADAPT Engaging Content Engaging People | AI IN MY LIFE

- Learn about AI and how it's used
- Uncover some of the ethical and privacy implications of AI
- Evaluate the role of AI in your life and in society

Our Partners:

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License (cc) BY-NC-SA

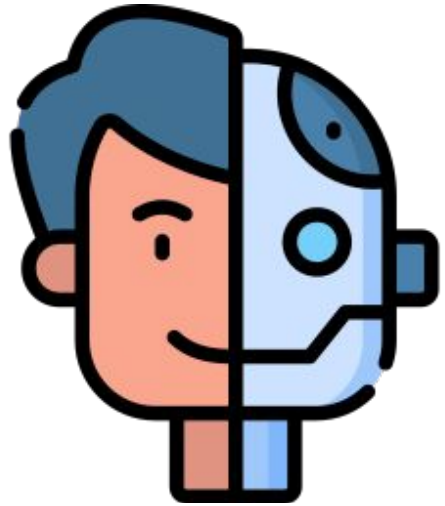
What is AI?



Artificial intelligence refers to **many different technologies** that are designed to **accomplish tasks** that can **otherwise be only carried out by human minds**, for example identifying patterns, recognising images, understanding languages or solving problems.

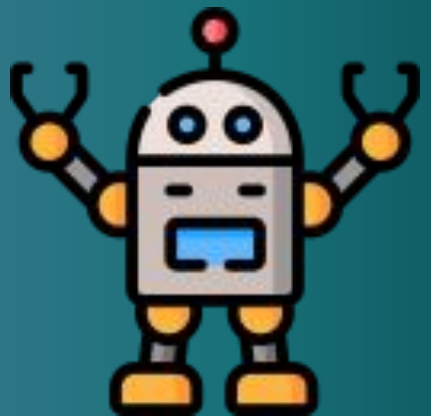
This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

Ethics and AI



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License
(cc) BY-NC-SA

Let’s start

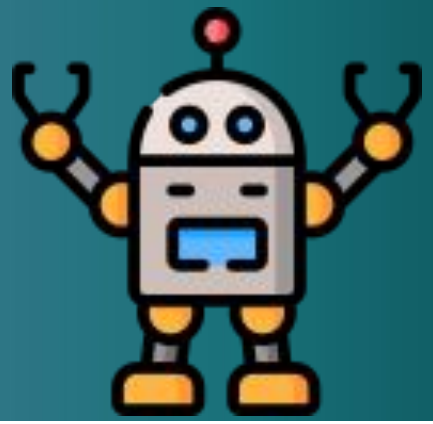


What do we mean by “ethics”?

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

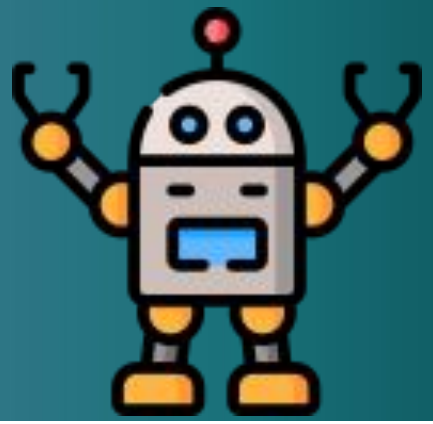
What do we mean by “ethics”?

*Our **understanding** of **what is right and wrong,** as well as the **rules** that individuals and the society should follow.*



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

What do we mean by “AI ethics”?



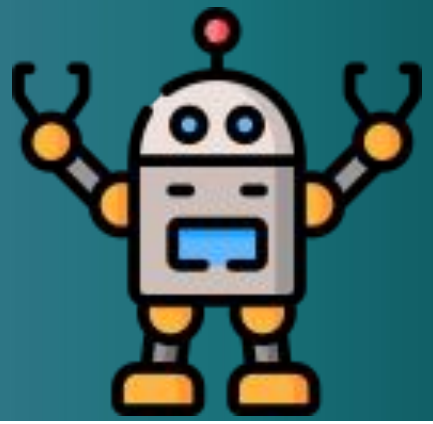
AI ethics refers to the **moral principles and values** that should guide the development and use of artificial intelligence systems.

AI systems should be designed and used in a way that **benefits society** and **follows ethical principles**.

Issues like **fairness**, **transparency**, **privacy** and **safety** are important ethical considerations.

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License (cc) BY-NC-SA

Why does ethics matter for AI?



The Telegraph

‘Unethical’ judge asks ChatGPT for advice on child’s medical rights

THE IRISH TIMES

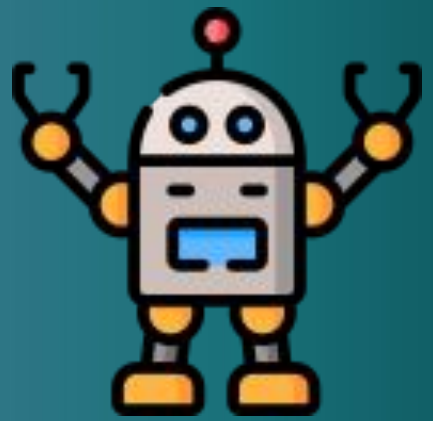
Advance of AI creating a moral minefield

Artificial intelligence is now capable of making decisions without any human intervention, so how do we navigate the ethical issues raised?

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

(cc) BY-NC-SA

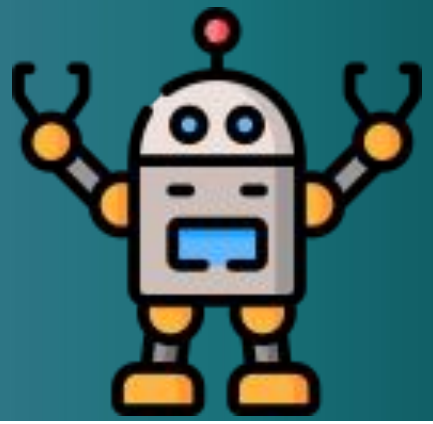
Why does ethics matter for AI?



- AI has the **potential for immense impact**, both positive and negative.
- AI systems are increasingly being **entrusted with high-stakes decisions** that affect human lives and society.
- AI learns from data, which can **encode human biases and prejudices**. Unethical applications could automate or worsen injustice.

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

Why does ethics matter for AI?



- As AI gets more capable and autonomous, we need to **maintain human accountability and control**.

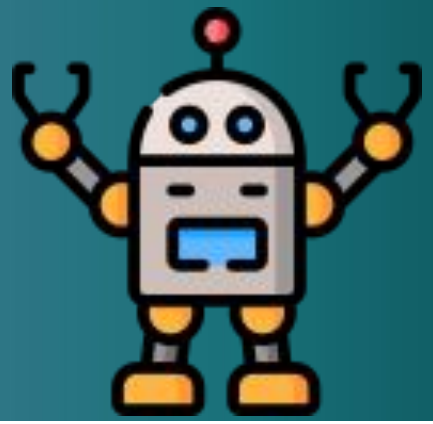
- Ethical issues around AI use, like privacy invasion or job losses, require careful consideration to **avoid public backlash**.

Ethics helps ensure AI development and use is guided in a socially responsible direction.

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

What rules would you consider?

You are given the task of creating a **set of rules for** a scientist who is **creating an AI bot**.



This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

Ethical Considerations for AI Development (1 of 2)

- **Human Agency and Oversight**
  All decisions are reviewed by humans and humans are the "in charge" of final decisions.

- **Technical Robustness and Safety**
  AI tools do not contain errors and their operation does not lead to harm.

- **Privacy and Data Governance**
  There are strict rules about people's data and how AI is able to use it.

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

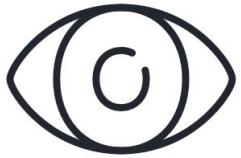
(cc) BY-NC-SA

Ethical Considerations for AI Development (2 of 2)

- **Diversity, Non-Discrimination and Fairness**
  AI should work equally well for differen people and in different contexts. The benefits of AI should be shared equally.

- **Societal and Environmental Well Being**
  AI should impact the environment and the society in a positive way.

- **Transparency**
  It is possible to say what decisions AI makes, what steps led it to those decisions and what data informed them



- **Accountability**
  We know who is responsible for the AI and we can fix problems or enforce sanctions when something goes wrong.

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

(cc) BY-NC-SA

Scenario A: ChatGPT and school assignments

https://www.youtube.com/watch?v=Fn8jDanbf0c

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

(cc) BY-NC-SA

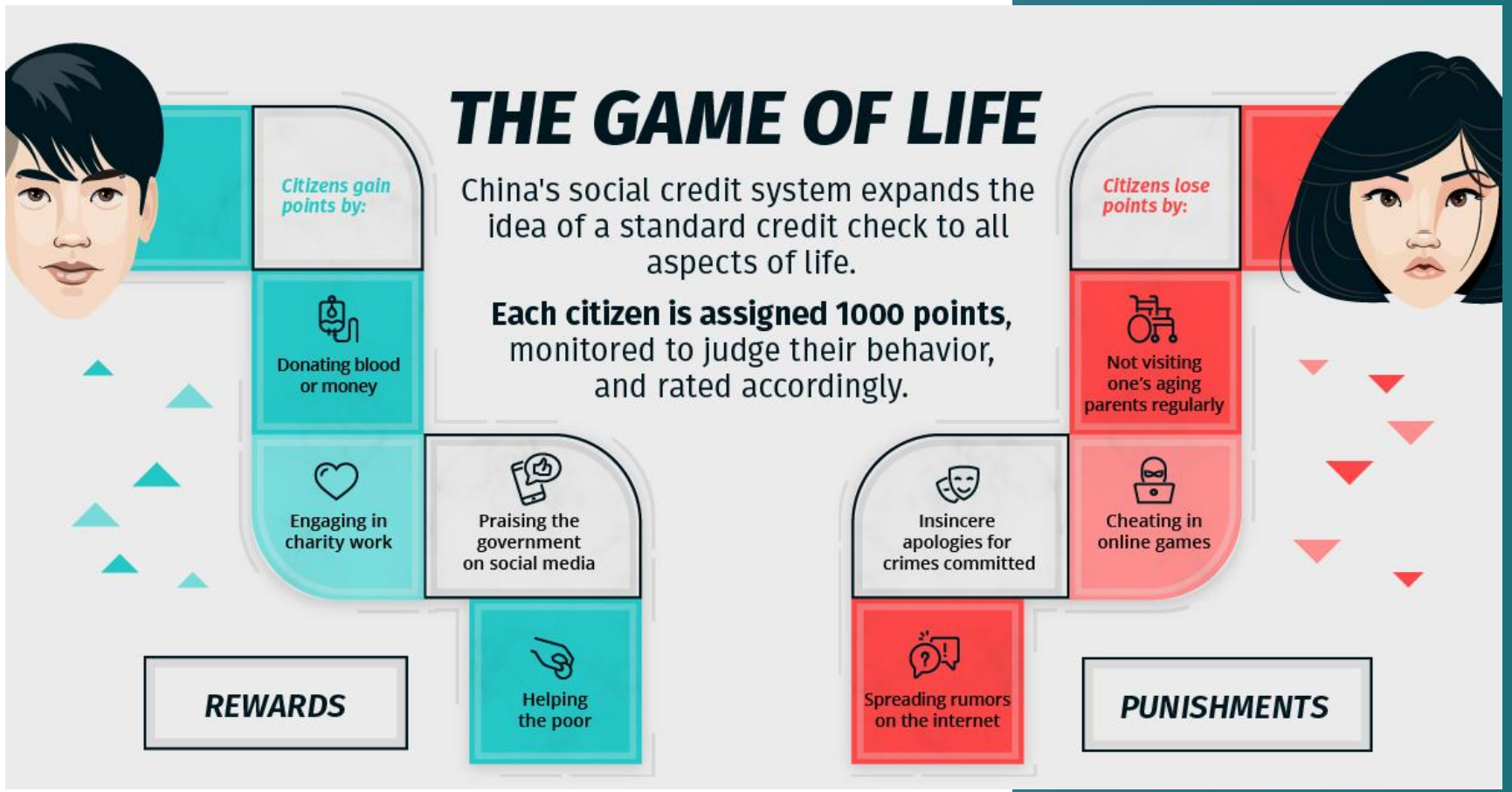
Questions for Scenario A

- Should you ask AI to help with your homework?
- How is this different to working with other (real) people or asking a parent, sibling, or friend for help?
- How can we establish trust between students and teachers in a world where AI tools like ChatGPT exist?

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

(cc) BY-NC-SA

Scenario B China’s Social Credit System



[China's social credit system keeps a critical eye on everyday behavior - YouTube]

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License
(cc) BY-NC-SA

Questions for Scenario B

- Within months of early trials of this system being launched in 2014, more than 14 million people opted in. Why do you think this is?

- How would you feel about such a system being introduced in Ireland? Would you opt in?

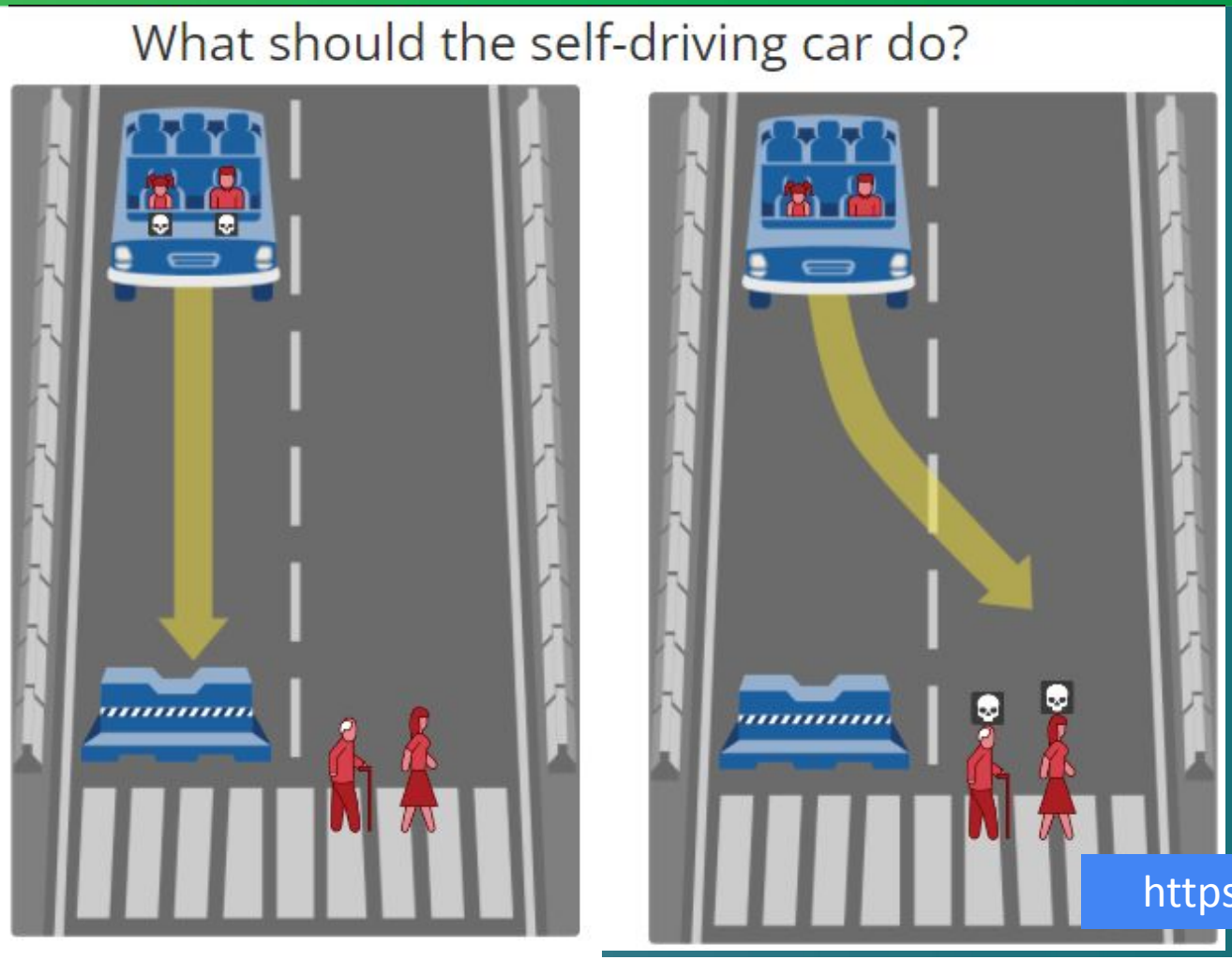
- Should researchers (in universities or in companies) have to consider the potential uses to which the innovations they develop might be put? Should they be held accountable?

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

(cc) BY-NC-SA

Ethical Decisions of AI

The self-driving car with sudden brake failure will continue ahead and crash into a barrier ***killing a middle aged man and his young daughter***



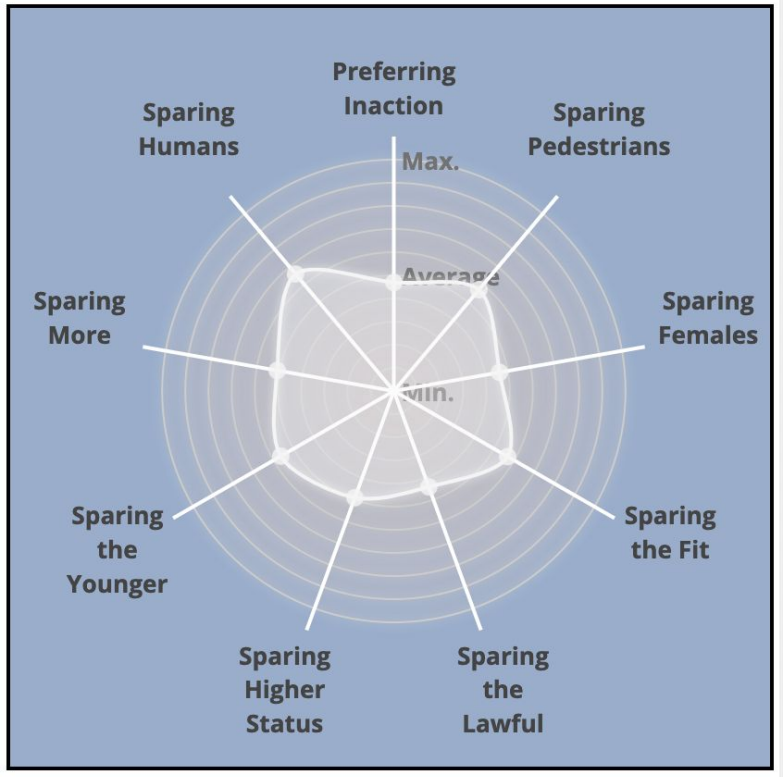
The self-driving car with sudden brake failure will continue ahead and crash into a barrier ***killing an elderly man and a middle aged woman***

https://www.moralmachine.net

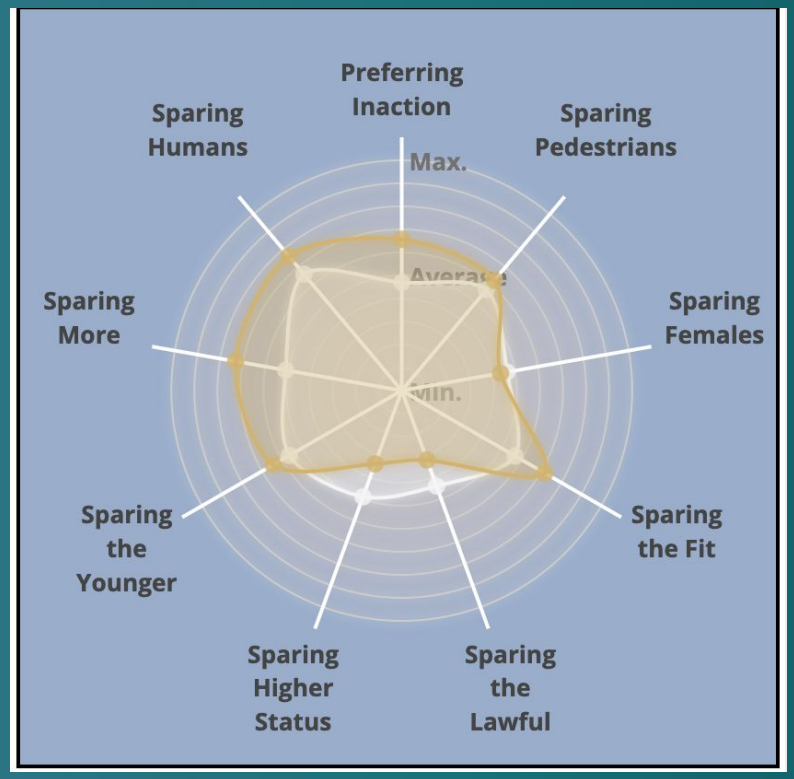
This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

(cc) BY-NC-SA

Ethical Decisions of AI: How does Ireland compare?



The grey area is the world average



The grey area is the world average
The yellow area is the average of responses from Ireland

https://www.moralmachine.net

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

(cc) BY-NC-SA

Ethical Decisions of AI: How does Ireland compare?

How contributions from Ireland compare to other countries

World Ranking (out of 117 Countries)	Preferring Inaction	Sparing Pedestrians	Sparing Females	Sparing the Fit	Sparing the Lawful	Sparing Higher Status	Sparing the Younger	Sparing More	Sparing Humans
Ireland	27th	45th	65th	24th	92nd	92nd	45th	6th	37th

https://www.moralmachine.net

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

(cc) BY-NC-SA

Will we all be able to find work in a world with AI?

Automation is often seen as a threat to manual labour. Robots replace factory workers and farmers, while self-driving cars come after human drivers' jobs.

But **AI is also trained to perform** more intellectual tasks such as translation, programming, writing, medical diagnosis or teaching.

How do we make sure that entire professions do not disappear and that we all have a chance at meaningful employment and a decent standard of living?

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

(cc) BY-NC-SA

What about the impact of AI on our planet?

The data used by AI is stored and processed in enormous d**ata centres**, each made up of millions of servers and computers.

In 2022, data centres accounted for **18% of Irish energy consumption**. That's going to grow as our use of AI increases.

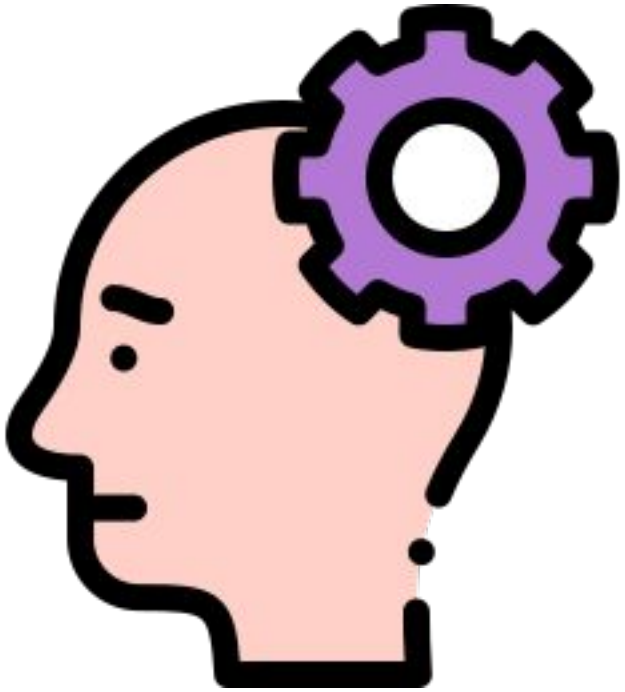
As the servers require cooling, it is estimated that ChatGPT uses half a litre of **water** for every 5 to 50 prompts it answers!

Minerals and metals used to manufacture the servers are **mostly found in developing countries, but their extraction is destructive to the environment and dangerous** to the local population.

Can we justify the rapid expansion of AI in the middle of a climate crisis?
Is it possible to produce the necessary equipment in a sustainable and fair way?

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

Questions to consider



Who should be blamed when decisions made by AI lead to harm?

What are the differences between the rules that should apply to ethical AI and those that govern our own ethical behaviour?

To what extent can we ignore the risks of AI to enjoy the benefits it provides?

What can we do as citizens to influence how AI is used?

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

(cc) BY-NC-SA

What have we learned?

AI presents important ethical questions

Those developing AI need to think and act ethically

Our use of AI also needs to be ethical

It is vital for us to balance the advantages and disadvantages of AI

This work is licensed under a Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License

(cc) BY-NC-SA

AI IN MY LIFE | #Discuss AI

A World Leading SFI Research Centre

Science Foundation Ireland sfi For what's next

Want to find out more about AI?

Sign up for more AI in My Life modules at:

www.adaptcentre.ie/projects/ai-in-my-life/

Thanks to our partners:

aws InCommunities · DCU · FUSE · Lero The Irish Software Research Centre · Midlands Science · Future of Privacy Forum · Maynooth University National University of Ireland Maynooth · TAP Trinity Access Programmes · MIC