

AI IN MY LIFE #Discuss AI

AI in My Life Taster Teacher Guide

Al in My Life Taster

The AI in My Life taster module provides an introduction to some of the key topics covered in the broader ADAPT AI in My Life workshop series.

Suggested Time: ~1.5 hours

Background

There are no prerequisites for this module. The module provides a condensed version of the course for teachers and students who do not have time to undertake multiple AI in My Life modules. Note that some of the content and activities feature in the full modules.

Curriculum Links

The interactive and reflective nature of AI in My Life ensures that students will hone the five key skills central to teaching and learning across the Transition Year curriculum:

- Information processing
- Critical and creative thinking
- Communicating
- Working with others
- Being personally effective

An outline of links to the Leaving Certificate curriculum is provided after the module walkthrough.

Materials Needed: PowerPoint presentation, Laptop, Screen, Internet Access, Timer. Students will need access to mobile phones or tablets for some of the interactive activities.

Module Overview

Introduction (~3 mins.)

A quick introduction to the module and outline of the learning goals.

What is AI (~12 mins.)

Starts with students completing a short questionnaire on their current familiarity with AI and its uses, then defines what AI is and features a video highlighting some of the benefits and potential drawbacks of AI research, development and use.

Machine Learning (~18 mins.)

Many AI applications are based on Machine Learning (ML). This section looks at what ML is and some examples of how it's used in our everyday lives. Students try out Google's Thing Translator and discuss some uses of facial recognition technology.

AI and Bias (~16 mins.)

Considers the potential of AI to either exacerbate or eradicate human bias. A short emotion detection game encourages students to reflect on why the tool they use is better at recognising some faces and emotions than others.

Is AI always used for good? (~14 mins.)

Al offers tremendous potential for good at both the individual and societal level. Recent Al-enabled advancements such as Deepfakes are posing serious questions about the use of Al for negative purposes. Students will learn to spot Deepfakes and will reflect on whether this technology could also be used for good.

The Importance of Data (~12 mins.)

A closer look at the value of data, followed by a short activity on students' attitudes to safeguarding the privacy of their data, and key tips for how students can take some control of their data while using AI tools and apps.

AI and Ethics (~9 mins.)

Highlights some of the ethical implications of AI development and use, and puts students in the role of a driverless car developer – what value would the student assign to different categories of road user in an unavoidable crash scenario?

Recap and Evaluation (~6 mins.)

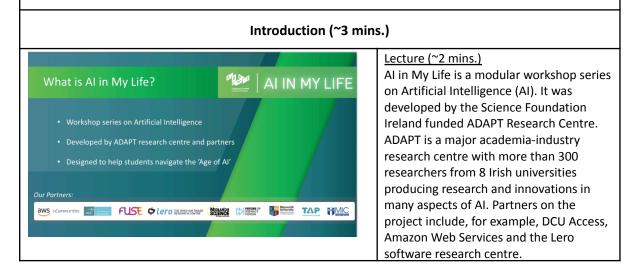
A brief recap on what students have learned in this module and an opportunity to ask questions about topics they would like to explore more.

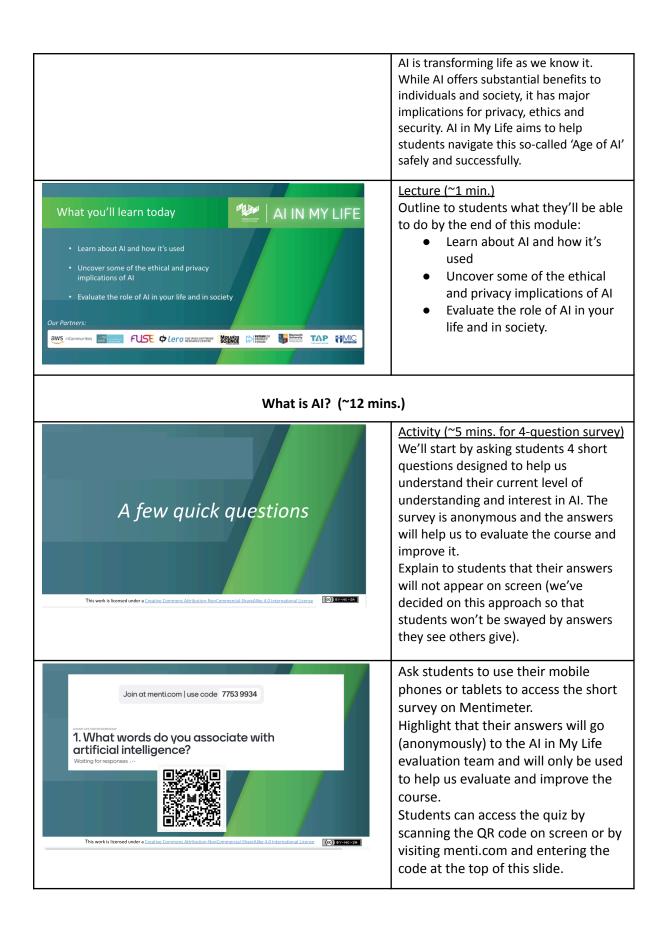
Al in My Life Taster Module Walkthrough

Learning Intentions

By the end of this workshop, students will be able to:

- Give examples of how AI is used
- State some of the ethical and privacy implications of AI
- Evaluate the role of AI in their lives and in society



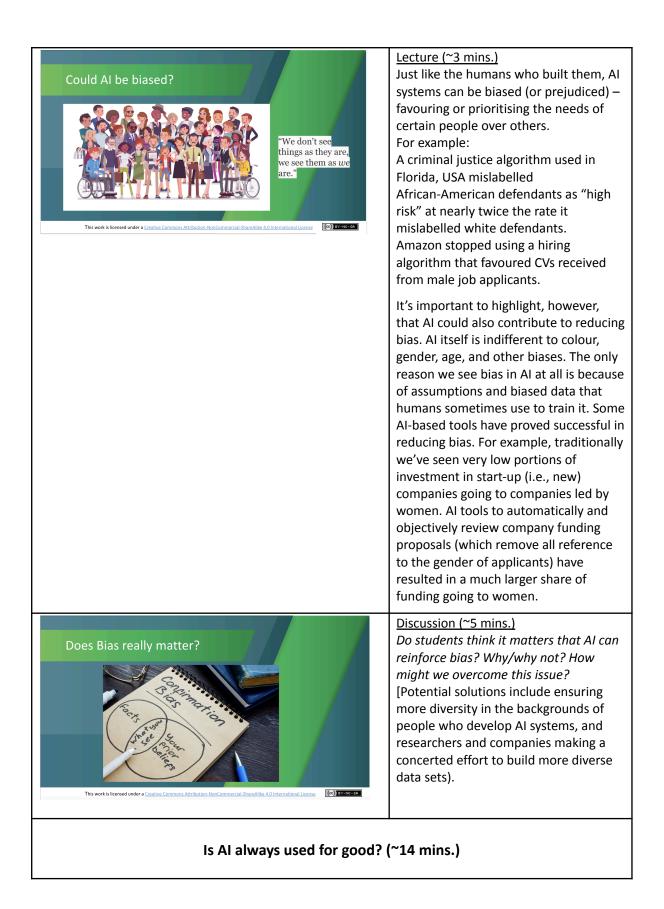


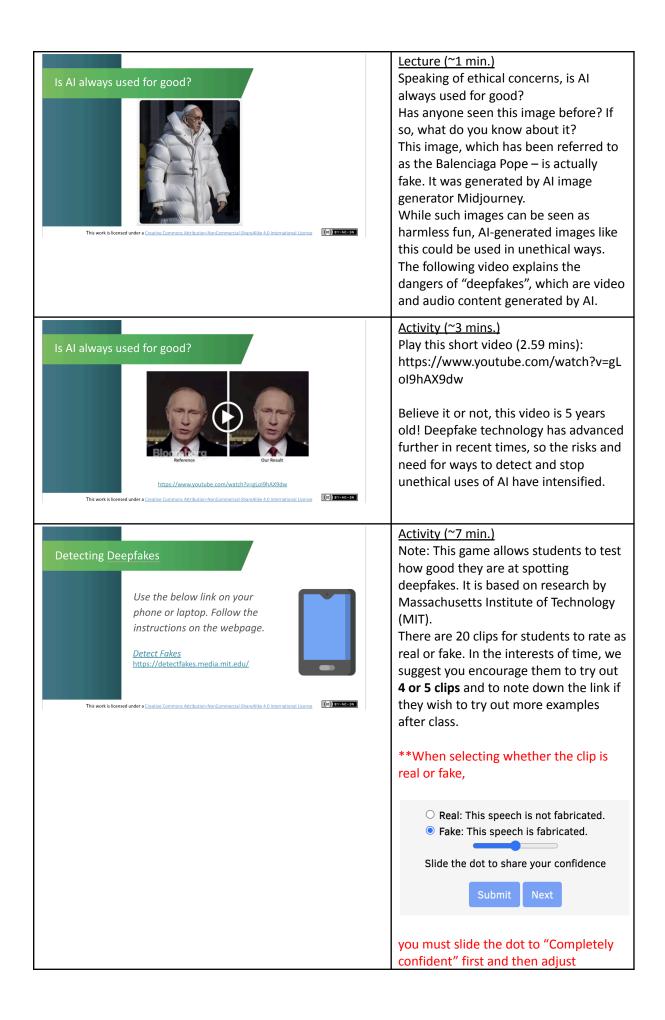
Join at menticom use code 7753 9934 ******* 2. l understand what 'Artificial Intelligence' is <u> </u>	Encourage students to proceed to answer question 2.
Join at menticom use code 7753 9934 3. I use Artificial Intelligence in my daily life.	Encourage students to proceed to answer question 3.
This work is licensed under a <u>creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License</u> (c) BV-No:54	
Join at menticom use code 7753 9934 *********************************	Encourage students to proceed to answer question 4, which is the final question.
This work is licensed under a <u>Creative Commons Attribution-NonCommercial-ShareAlike 4.0 International License</u>	Lecture (~2 mins.)
What is A!? 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.	Explain what AI is. Go through the following definition, checking that students understand: 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.

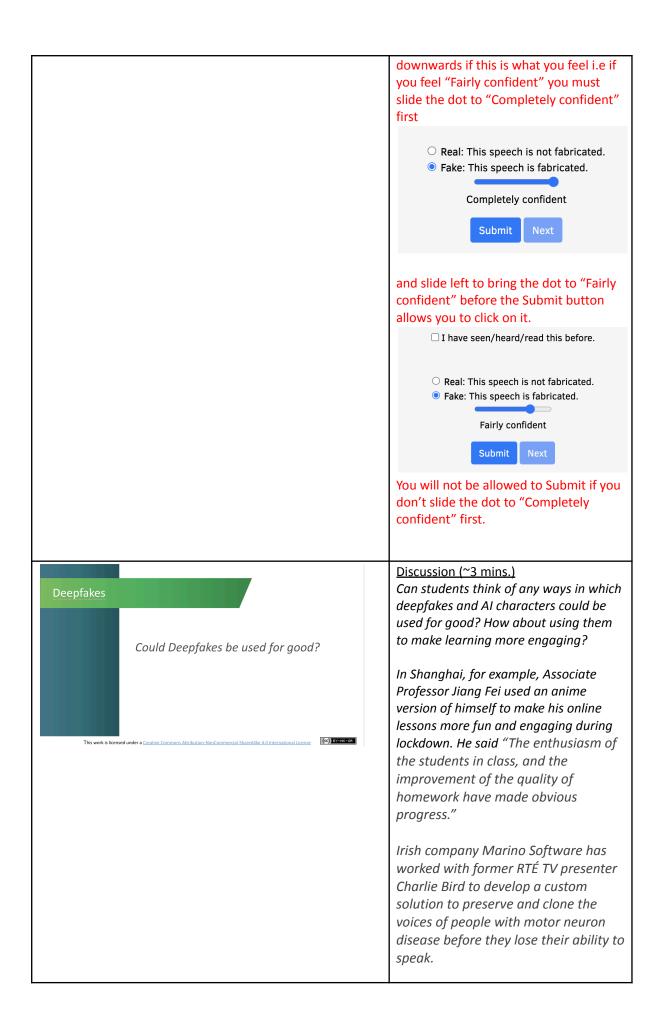
	Activity (~5 mins.) This 2.5 minute video from the Royal Society in the UK explains some of the benefits of AI and ways in which it's being used currently. It also encourages us to reflect on whether AI development and use can have potentially negative effects on individuals and society and what we can do to address this issue. Let's take a look. Ask students to note some of the beneficial uses of AI that the video mentions.	
Machine Learning (~18 mins.)		
Machine LearningImage: Strategy of the strat	Lecture (~1 min.) Many AI applications are based on Machine Learning – so much so, that the terms AI and Machine Learning are often used interchangeably. Machine Learning is an application (or subset) of AI that focuses on developing computer programmes that can access data and use it to learn and improve from experience. In the 1950s AI pioneer Arthur Samuel defined Machine Learning as "the field of study that gives computers the ability to learn without explicitly being programmed."	
<text><text><image/></text></text>	 <u>Activity (~3 mins.)</u> Where might we use Machine Learning in our everyday lives? Ask students to call out some examples. Netflix, for example, learns from your browsing and watching history in order to present you with recommended content based on what it has learned about you and your preferences. Email accounts classify spam into a separate folder from inbox. Personal assistants such as Siri or Alexa also use Machine Learning to function. 	

	Activity (~4 mins.) Watch the short video (2.41 mins) from the University of Oxford, U.K. (https://www.youtube.com/watch?v=f_ uwKZIAeM0) and ask students to note additional examples of Machine Learning applications.
	Activity (~5 mins.) Let's try out an app that uses Machine Learning. This one, called Thing Translator, is being developed by Google to recognise objects and translate the names of them into foreign languages. It has learned from huge amounts of data and the more data it gets, the more accurate the translations become. Try it out for yourself. [Ask students to visit the link on their mobile phone or laptop (if the latter has a functioning camera). If students are unable to access the app, show them how it works via the short video (57 seconds) at https://www.youtube.com/watch?v=bH 5sU7ew5V4]
	Lecture (~1 min.) Facial recognition systems are also built on Machine Learning and trained with large amounts of data. The more data they are provided with, the more accurate they become at recognising faces. Discussion (~3 mins.) Ask students if they can think of useful ways in which they've seen facial recognition used. Some examples are: To unlock your mobile phone For surveillance in shops or other business premises Lecture (~1 min.) The Irish Government has proposed allowing Gardaí to use facial recognition technology but its introduction has been postponed due to objections by legal experts and human rights advocates. This highlights that the

	benefits of facial recognition technology need to be weighed up with their potential effects on the privacy and human rights of individuals.
Al and Bias (~16 n	nins.)
Emotion Detection	Lecture (~1 mins.) One of the things that machines find hardest to deal with accurately is emotion – a truly human characteristic. However, just as a child learns to read emotions through years of experience, so too can machines learn to read our emotions. But how effective are they at doing so?
	Activity (~7 mins.) Let's try out a short game on this topic. Use the link on the screen to access an interactive game and follow the instructions on the web page to play the game. Note: This game takes about 5 mins. to complete After playing the game, ask students why they think machines are better at recognising some faces (and emotions) than others. Essentially, this comes down to bias and lack of diversity in the data used to train the system (i.e. the examples given to it to help it learn). Often these systems are built using predominantly white (i.e., Caucasian) adult male examples/data and so they become good at recognising white adult male faces. They are typically less accurate at identifying the faces of people of other ethnicities, women, children and the elderly because they've been trained on few examples of such faces. Eradicating such bias from AI systems is a key ethical concern of AI development and use.

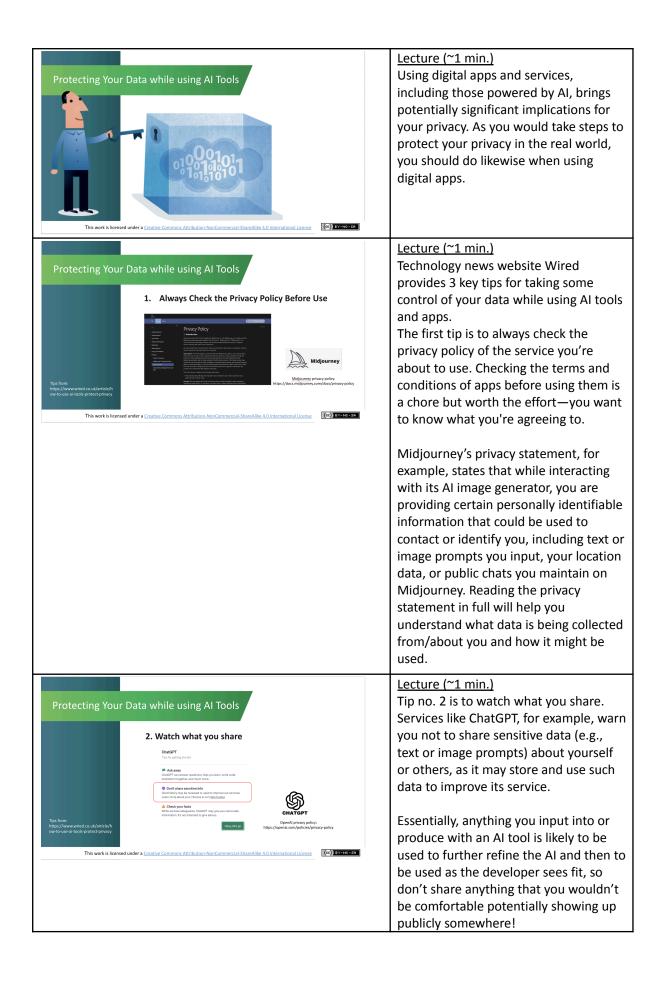


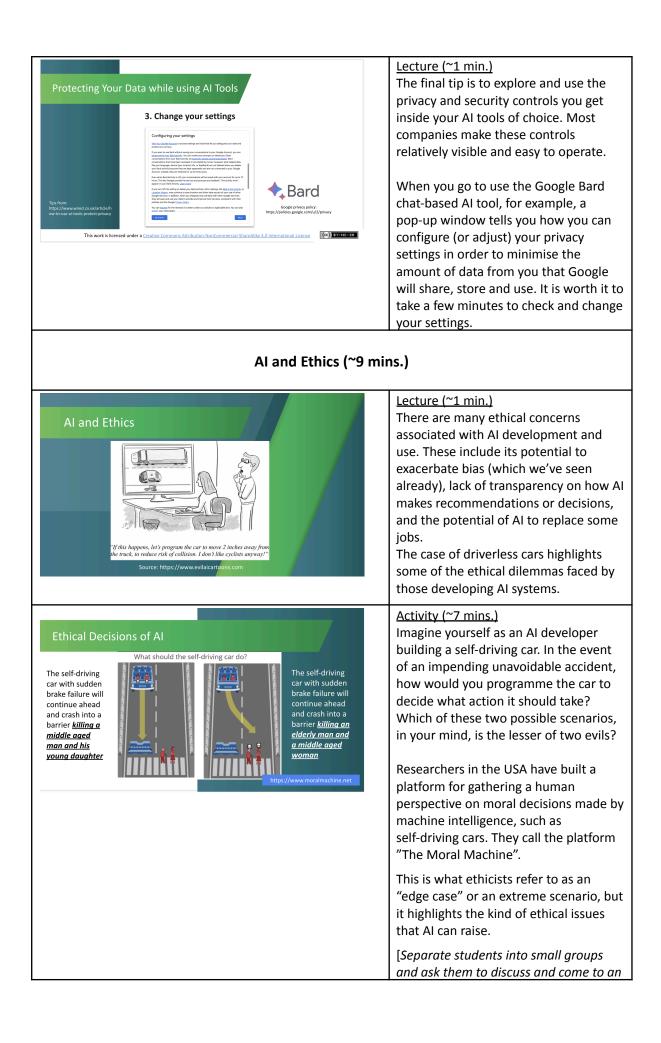




The Importance of Data (~12 mins.)

The importance of Data (~12 mins.)	
What's your data worth? Image: Compared of the state of t	Lecture (~1 min.) We've seen that Machine Learning systems need data to improve their accuracy. From where do they get this data? When it comes to digital apps, it's often said that if you're not paying for the product, then you ARE the product! This is because the technology we use in our daily lives collects huge amounts of data from and about us.
	The reason your data matters to businesses so much is what it's used for. Not only is it used to target you with personalised ads, but it also tailors online experiences for you, tracks how you use websites, monitors the kind of products you spend time looking at, and helps brands try and sell more to you.
Do you care about your data? Image: State of the state of	Activity (~4 mins.) Do you care about your data and keeping it safe and private? Anyone know who this guy is? He's Mark Zuckerberg, billionaire co-founder of Facebook and its parent company Meta. [Walk through the questions with the students, asking them to stand up initially, and sit down as soon as they answer "yes" to a question. Observe how reluctant students are to share their data]
 Do you care about your data? 0 oy ou mind that your teacher knows your name? 0 oy ou mind that (s)he can see your insta/WhatsApp account (even though you didn't add him as a friend)? 0 oy ou mind that (s)he knows your top 5 friends? 0 oy ou mind that (s)he knows how you reacted to others' posts? What about if (s)he knows how you reacted to others' posts? What about your DMs? 	Activity (~3 mins.) Repeat the exercise, asking this time about their teacher accessing their data. If there are differences in their attitudes in sharing between Mark Zuckerberg and their teacher, ask students to reflect on why this is the case. What does that say about their attitudes to data and privacy?





	agreement on which is their preferred course of action for the car. Ask them to report back to the whole class on their decision and the rationale for it. Then ask students how they found the activity: did they come to agreement quickly or were there different opinions in the group. Did they ever think about how AI systems like this must make ethical decisions?] There are hundreds of these scenarios on the Moral Machine website. You can view and "judge" them yourself. You can also submit your own scenarios.
Auforers substantial benefits in the potential benefits in the potential benefits in the potential sole with the potential sole with the potential individuals and sole with the potential individuals of the potential benefits in the potential benefits in the potential sole with the potential individuals in the potential individuals in the potential sole with the potential benefits in the potential sole with the potential benefits in the potential individuals in the potential benefits in the potential sole with the potential individuals in the potential sole with the potential benefits in the potential benefits in the potential sole with the potential individuals in the potential sole with the potential benefits in the potential sole with the potential individuals in the potential sole with the potential benefits in the potential sole with the potential individuals in the potential sole with the potential individuals in the potential sole with the potential sole with the potential individuals in the potential sole with the potential individuals in the potential sole with the potential sole withe potential sole withe potential sole with the potential sole with	Lecture (~1 min.) The key message here is that AI offers substantial benefits to individuals and society – from more accurate cancer screening and fraud prevention, to automating repetitive tasks and maybe even safer car journeys. These benefits must be balanced with the potential ethical implications of AI, however, in order to ensure a safer and fairer 'Age of AI' for all.
Recap and Evaluation (~	6 mins.)
What have we learned? At is transforming our lives The influence of At is growing constantly We need to balance the benefits with the drawbacks You need to be ready for the 'Age of At'	 Lecture (~1 min.) A brief recap on what students have learned in this module and an opportunity to ask questions about topics they would like to explore more. Al is transforming our lives The influence of Al is growing constantly We need to balance the benefits with the drawbacks You need to be ready for the 'Age of Al'
Join at menticom use code 3356460 Autoreseever Noting for responses	Activity (~5 mins. total) We're going to finish by repeating the Mentimeter survey. This will take about 5 mins. The survey will ask you if (or how) your knowledge of or attitude to AI has changed by doing the module, and what you thought of it. Again, your answers will be anonymous and will only be used to help the AI in My Life evaluation team to evaluate and improve this module.

	Access the survey on your phone or
	tablet by scanning the QR code or by
	visiting menti.com and entering the
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Join at menti.com use code 33 56 46 0	Proceed to answer Question 3 as
3. I use Artificial Intelligence in my daily life.	quickly as you can, and then work
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Please continue right to the end of the survey (8 questions)	are 8 short questions in total.
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	That's it for the AI in My Life taster
ALIN MY LIFE #Discuss AI	module.
AI IN MY LIFE #Discuss AI	We hoped you enjoyed this workshop.
	Don't hesitate to contact us if you'd like
	-
Want to find out more about AI?	to try out more modules.
Sign up for more Al in My Life modules at:	
www.adaptcentre.ie/projects/ai-in-my-life/	
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Curriculum Links

In addition to its relevance to honing the key skills central to teaching and learning across the Transition Year curriculum, the STEAM focus makes the AI in My Life content relevant to the following subjects:

Leaving Certificate:

Technology Politics and Society Computer Science Design and Communication Business Economics

Applied Leaving Certificate: Engineering Technology Social Education Science Information and Communication Technology – Specialism

Additional Resources

The following resources provide additional background on the topics covered in this module:

- How to Spot a Deepfake https://time.com/6266606/how-to-spot-deepfake-pope/
- Why are Women Beautiful and Men Intelligent? [Video featuring Eva Vanmassenhove's work on detecting and combatting gender bias in machine translation systems. Eva was formerly a researcher with the ADAPT research centre at Dublin City University] https://www.universiteitvannederland.nl/colleges-en/why-are-women-beautiful-and-men-intellig ent
- New 'voice banking' technology to help Charlie Bird and other MND sufferers [Irish Times article] https://www.irishtimes.com/news/ireland/irish-news/new-voice-banking-technology-to-help-cha rlie-bird-and-other-mnd-sufferers-1.4776786

If you have questions or comments about this lesson, please contact us at education@adaptcentre.ie