

Discussion Guide on Ethical AI

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Purpose

This guide serves as a complement to The Digital2030 Challenge to delve deeper into the topic of Ethical Artificial Intelligence (AI). Upon completing the Challenge, individuals can leverage this guide to begin discussions in classrooms, among friends or family, and even for self-reflection.

This guide is catered for anyone interested in exploring Ethical AI. This includes, but is not limited to, educators, community leaders, parents, and young people passionate about global issues. We encourage you to embrace it as a tool for meaningful engagement and understanding.

Background

Today's young people are the first generation to grow up in a world so thoroughly influenced by Artificial Intelligence (AI). As technology seamlessly integrates into our daily lives, young people need the analytical skills to understand how it impacts the environment around them - and the tools to shape their future. We are at a critical junction in the way society functions, and we need to act FAST to make sure technology stays ethical.

This guide focuses on the role of AI in our world, how it can be used to solve problems, and some of the ethical considerations it can raise. It primarily focuses on SDG 10: Reduced Inequalities, SDG 8: Decent work and economic growth, and SDG 9: Industry, Innovation & Infrastructure. It is meant to be used in tandem with The Digital2030 Challenge: Reducing Inequality.

Introduction

What is AI?

AI stands for Artificial Intelligence. **AI is a simulation of how humans think and act, acted out by machines.** Machines gather information (like data) each time they are used by humans to get smarter so they become more "human-like" and better at whatever it is they are designed to do. Real-world examples of AI include facial recognition, voice assistant, translation, recommendation algorithms, and search engines.

How does AI work?

How AI works depends on what it has been trained to do. Many of the AI that we interact with regularly are recommendation engines: whether that's streaming recommended music or videos or seeing adverts for things we might be interested in.

A recommendation engine is made up of algorithms, which are like step-by-step instructions or recipes. Our actions are the ingredients that go into the algorithm. The algorithm compares our data against previous data – other people's actions. Then, it identifies patterns to try and predict a recommendation that you might like. For example, if you listen to a lot of pop music, you probably want to hear more pop music, and not some heavy metal! Similarly, lots of people who buy a baking recipe book may then start to buy mixing spoons, cupcake liners or baking trays so they can bake the cakes they are reading about. The more data an AI is trained on, the more accurate its predictions can be.

An AI needs to be trained on lots of different data, and taught to recognise patterns and connections in order to predict what might happen next. This means the people who train an AI, the programmers, play a really important role in making sure it works for everybody, and not just people who like the same things as they do.

What is Ethical AI?

Ethical AI is AI that is safe for humans because it considers their needs and rights. Different groups use different names when talking about this: Mozilla talks about Trustworthy AI, while other organizations have signed the Montreal Declaration for Responsible AI. There are subtle differences, but the main focus is **making sure that AI can not, does not, and will not cause harm to humans.**

Why is it important to create Ethical AI?

AI can improve our lives, but it can also do a lot of damage. If we want to live in a fair and equitable world, we need to make sure that AI is ethical, and diverse people are involved in creating better AI that is helpful and good for all.

What does Ethical AI look like?

Ethical AI isn't just one tool or product: **ethical AI needs to be an ongoing process of collaboration and discussion.** Diverse people need to be involved from the planning stage, all the way through to making sure a product or service doesn't do any harm in the real world. Education is critical to creating ethical AI as digital citizens need the tools

to understand what AI is doing, how AI is influencing their world, and how to challenge AI that doesn't meet these standards.

Ethical AI could be improved by drawing on the UN's Sustainable Development Goals (SDGs). These 17 goals have been agreed on by 193 countries and include things like quality education, decent work, and reduced inequalities.

Why does representation in data matter?

A recommendation engine can only make recommendations based on the data it has been trained on. This means that if **only a certain group of people's data are put in, only their preferences are registered** and the recommendation engine will only generate recommendations based on their particular profiles. This means the AI can be biased, as it doesn't fairly represent society as a whole. However, as digital citizens we should be able to decide whether or not the actions that make up our digital footprint are recorded, and we should know what that information is being used for. This is part of the process of becoming algorithm & data literate.

Why is Algorithm & Data Literacy so important?

Just as learning to read and write are important skills to participate fully in society, being algorithm & data literate is a key tool to participate in the new digital world. By **understanding how our data influences the algorithms around us**, we can **take control** of our digital rights and make more informed decisions about how we interact with AI online.

It can be overwhelming thinking about algorithms and data, because they're mostly invisible and all around us. You don't need to be a data scientist to understand it all - it's just important to know that you're the one in charge of your data!

What are the Sustainable Development Goals (SDGs)?

In 2015, the United Nations, which is an organization made up of nearly all of the countries in the world, decided that we need to take action to make the world a better place to live for everyone and everything - leaving no one behind.

They looked at all of the biggest problems facing the world: hunger, poverty, inaccessible education not being free for all young people, the climate crisis, how technology is rapidly changing the jobs that exist, and more. To solve these problems, they created the Sustainable Development Goals or SDGs for short.

Sustainability is important as it means using the planet's resources in a careful way so that we don't run out and they last a long time.

Discussion Questions

The questions and scenarios below are meant to guide your conversation around ethical AI in society. They are flexible reference points that you can customize for your specific learning needs and objectives.

1. The state of AI, Algorithms and Data

- Why do you think it might be important for young people to learn about different kinds of technology, like code, data, and Artificial Intelligence?
- What subjects do you think you should learn about in school to make the world a better place? What skills do you think you need?
- What skills do you think you need to understand how algorithms and data work?
- What are some ways we can ensure data used to train AI is inclusive?
- Knowledge is power - but too much knowledge can be overwhelming. How do you think you can engage other young people in conversations about algorithm & data literacy without overwhelming or scaring them?
- How do you think algorithm & data literacy should be taught?
- Who do you think needs to learn the most about algorithms & data literacy?

2. Leaders

- Do you know if your government is doing anything to ensure AI is ethical?
 - *If they are, how do you think they should engage with young people on these measures?*
 - *If they are not, what do you think they should do to make human life better - without having negative consequences?*
- What kind of effects do you think AI has on young people when they're using technology?
- How would you change the education system to better prepare you to make the world a better place?
- What kind of rules do you think should be put in place to make sure new technologies like AI are fair, ethical, and unbiased?
- Who do you think should be responsible for ensuring that algorithms and data are representative of everyone in the population?
- How can we use algorithms and data to create a better world and meet the SDGs?

3. Ethical AI in the world

SCENARIO: AI in education

In large classes, it can be hard for educators to make sure that students who learn at different paces can stay engaged and get the help they need if they don't understand. The principal wants to introduce an AI teaching assistant that customizes exercises for each of the students. Their performance over the year will contribute to their final grade, which reduces the time teachers have to spend marking.

Teachers are concerned that the system can't help the students who need it the most nor can it take into account external factors that can impact learning, such as a family member getting sick, or learning exceptionalities like dyslexia.

- Is it ethical to force young people to use AI products, which could store their data (such as their school assignments) for an unknown period of time?
- Do you think there are ethical and trustworthy ways that AI could be used in the classroom?
- Would you want to learn using an AI teaching assistant? Why/why not?

SCENARIO: AI and representation in data

A French restaurant is opening in Toronto, and it wants to create some exciting new recipes that represent a fusion of French and Canadian cuisines. They decide to build an AI recommendation engine to help them come up with some new ideas. The manager asks all of the French chefs to add their ingredient lists. Then, the manager asks three chefs who grew up in Toronto to add their lists of ingredients. The manager is surprised when the new recipes that the AI produces do not include any indigenous Canadian ingredients or reflect any First Nations cooking that they've read about.

- Who do you think is responsible for the AI not knowing about indigenous ingredients?
- How do you think the manager could make sure that they get a more diverse variety of flavors from their AI?
- Why do you think it is important to get diverse people with different experiences to input data into AI?
- What do you think some of the consequences are of using biased data?
- Developers might not be representative of society as a whole and have their own biases. They might only train the AI on the things they know, so it can only create things similar to the food they like. How can we avoid bias in these tools?
- Do you think an AI is the best tool to use in this scenario, or should the manager try something else? Or is there a way to use AI and people together?

SCENARIO: AI as a tool to create (Generative AI)

To show how AI has become better at understanding human instructions, some developers have made a tool where people can enter prompts like “write a blogpost about the most environmentally-friendly form of energy” or “create a picture of a friendly handshake.” They argue that it can automate some tasks that take humans a lot of time, effort, and money. However, users immediately began to use it in unexpected ways. Students have been using the AI to write their homework for them, while others began asking the AI to create artworks, so they could hang unique pieces of art in their house without needing to pay an artist. Teachers are angry as they see this disrupting student learning and because the AI doesn’t always provide factual information, it is spreading misinformation. Artists are angry because it is stealing their work and changing it without asking, and they’re receiving no compensation for that work.

- Who “owns” an artwork or piece of writing that an AI creates? How might this impact people who make art or write for a living?
- If an AI creates a harmful, cruel, or incorrect piece of content, who is responsible for it?
- How can we prevent people from being misinformed by content that an AI creates?
- Do you think these tools that create new content should be used to educate young people?
 - *If yes: How do you think your teachers could use it in your school?*
 - *If no: Why not?*
- Are there ethical ways to use technology to create new content like art or pieces of writing? If so, how? If not, why not?
- Would you ever use an AI tool like this to do your homework for you?
 - *If yes: Do you think it’s fair that you can use it when others without internet access cannot?*
 - *If no: why not?*