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AI safety – Your data and AI

This guide and the associated slides contain all the guides to the activities you will need to run an AI safety session on the topic of data privacy in an AI powered world.

This document is not designed to be read from start to finish, it is recommended that you read the introduction and outline that follows and then use the following table of contents to jump to the documents for the activities.

Please give us your feedback!

We'd love to hear how you have used the Experience AI resources and what you thought about them. After using the resources, please take a few minutes to:

- Share your feedback in our user survey: rpf.io/exai-2mf
- If you are an educator, ask your learners to complete a short survey: rpf.io/exai-st

Your feedback supports us to make our AI resources accessible to everyone, and we really appreciate you giving your time to share what you think.

Introduction

The objective of this session is to help young people reflect on the data they are already providing to AI applications and how the prevalence of AI tools might change the way they protect their data.
Young people are already interacting with AI models on a daily basis and their prevalence will only increase.

It is vital that young people become savvy and use the opportunities they have to "train" models to benefit them and avoid potential harms. It is also important that they know how to protect themselves and their data from being used to train AI tools without their permission.

Learning objectives

- Explain the differences between rule-based and data-driven systems
- Evaluate the ways you share data that could be used in a data-driven system
- Build a set of expectations of fairness, transparency, and accountability in how an AI application uses your data

Key vocabulary

Data driven, rules based, personal data, media, large language models (LLMs), deep fakes, recommendation systems

Preparation

This session augments a data privacy lesson from traditional e-safety learning with the conceptual knowledge of data-driven AI systems and how they use data. Confidence leading discussions about personal data privacy will help you lead these activities.

Learners should be familiar with the idea of AI - that it stands for artificial intelligence, and that it's a type of computer system that's becoming more common - but do not need a precise definition to access the learning in this session. Optionally, you could complete Lesson 1 of the Foundations of AI unit to provide an introduction to the topic.

Activities for this topic

Activity	Description	Suggested timings
Video	Your data and AI	2 mins
	Short recap activity for the video	5 mins
Unplugged	Data detective – Learners will investigate how personal data fuels AI tools by exploring a fictional social media platform and data privacy	40 mins
	AI Business Boss – Learners will role-play as AI start-ups, pitching innovative product ideas to an investor while navigating ethical challenges of data collection and AI development	25 mins
Discussion topics	A series of discussions on how personal data is used to train AI tools and learners' responsibilities when interacting with these tools	10–30 mins

Combining activities for your session

The activities in this session are designed to be deliberately flexible to best suit your setting. It is recommended that every session begins with the 'Your data and AI' video.

After that you can either:
- Complete one unplugged activity
- Do both unplugged activities
- Add discussion topics to complement the activities
- Choose to only do the discussion topics
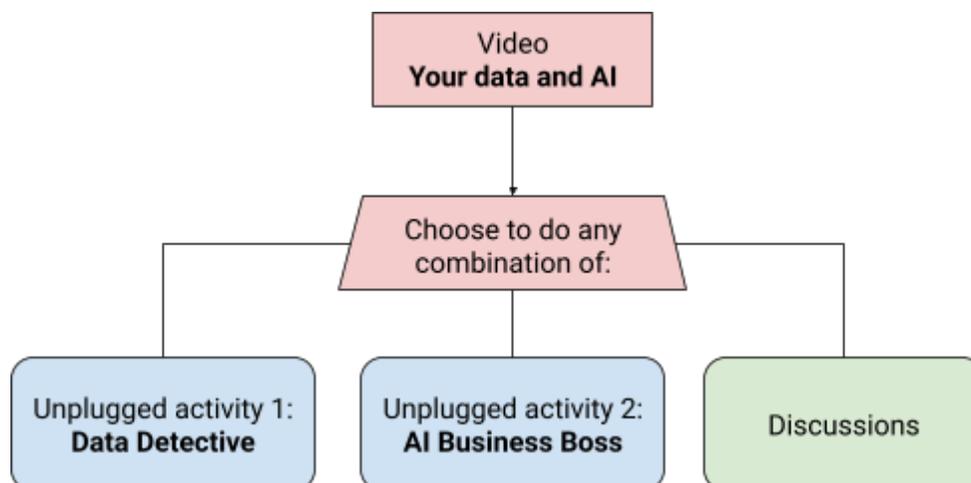
Example activity combinations

These are example pathways for the 'Your data and AI' session — you are free to adapt and mix activities to fit your time, learners' needs and learning goals.

For a 30 minute session, you can complete the following activities:
- Your data and AI video (skip recap activity, 3 mins)
- Unplugged activity: AI Business Boss (25 mins)

For a 60 minute session, you can complete the following activities:
- Your data and AI + recap activity (8 mins)
- Unplugged activity: Data detective (40 mins)
- Discussion (~10 mins)
    - Why is your data valuable to companies that use AI models?

OR
- Your data and AI + recap activity (8 mins)
- Unplugged activity: AI Business Boss (multiple rounds, 40 mins)
- Discussion (~10 mins)
    - What is your responsibility, individually and collectively, regarding personal data when engaging or interacting with an AI model?

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Your data and AI – Video activity guide

Introduction

This short animation will serve as a foundation on the ways AI applications use data. It will provide your learners with opportunities to discuss how comfortable they are with the ways their data is used.

The video explains the difference between rule-based and newer data-driven AI systems, and poses questions that will make your learners reflect on the type of data they want to protect and the ways they protect their data.

Key vocabulary

Data driven, rules based, personal data, data privacy

Preparation

This activity requires learners to watch a video, either all together or on their own devices. The video is hosted on YouTube — if this is blocked, you can use the downloaded version.

You will need:
- Slides (4–10)

Outline plan

Timings are rough guides. Adjust to suit your environment.

Introduction (Slide 5) – 2 minutes

Display: Slide 5

Explain: One of the central themes of these sessions is that AI systems are data driven.

AI systems use data in new ways

Newer AI systems make use of machine learning to solve problems in a data-driven way.

This means that instead of pre-programmed rules, example data is used to create **a model**.

This means that there are new ways for AI applications to use **the data** you supply.

Guidance
Explain that data-driven systems are data driven, and that this is a new way of creating programs compared to the traditional rule-based approach.

Video (Slide 6) – 3 minutes

Display: Slide 6

Do: Play the video that explores the difference between rule-based and data-driven systems and the impacts this might have on data privacy.

Your data and AI

Your data and AI

Watch the video on YouTube

Guidance
Questions for learners to consider during the video:
What are the two different approaches to creating software mentioned in the video? How are they different?
How does a social media platform use data to decide what videos to show you?
What are some of the things you can do to protect your data online?

Recap activity (Slides 7–10) – 3 minutes

Display: Slide 7

Explain: You will be doing an exercise to help cement learners' understanding of data-driven systems.

AI or not AI?

For each of the following software examples, decide whether or not you think it uses AI and justify your answer.

Think about whether it is **rules-based** or **data-driven**.

Guidance
The next three slides feature an example of a computer system. Ask your learners to decide whether the example is rule-based or data-driven or somewhere in between. Read the examples, and have learners discuss their answers. Then use the slide animations to reveal the answers.

Display: Slide 8

Ask: Is a recipe app that recommends recipes based on a user's social media feed AI or not AI?

Example 1

A recipe app that recommends recipes based on a user's social media feed

AI

The service will use the the user's posts, compare them to other users', and make a prediction of what the user would like to cook or eat.

There are too many variations in taste to be able to create rules for each user.

Display: Slide 9

Ask: Is a shopping app that uses formulas to work out the total cost of your shopping cart AI or not AI?

Example 2

A shopping app that uses formulas to work out the total cost of your basket

NOT AI

The app will work out the total cost of the basket using rule-based formulas.

Display: Slide 10

Ask: Is a medical chatbot designed to recommend a health service for common problems that patients have AI or not AI?

Example 3

A medical chatbot designed to recommend a health service for common problems that patients have

Could be AI

A chatbot could use IF/THEN rules to respond to **specific** inputs. This would not use AI.

If the chatbot is able to recognise the meaning of any sentence that a customer enters and use a model to produce an appropriate response, this would make it an AI application.

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Unplugged activity 1: Data detective – Activity guide

Introduction

In this unplugged activity, learners will explore the scale of personal data and media sharing, and discover how it fuels the AI models used by platforms. They will investigate a fictional social media platform called *Buzzworthy* and assist a friend in understanding how their data is being used by the social media platform and other key stakeholders. Through this activity, learners will develop a deeper awareness of the impact of their online presence and the importance of data privacy.

Key vocabulary

Artificial intelligence (AI), image recognition, recommendation system, data sharing, privacy, transparency

Preparation

You will need:
- Slides (11–24)
- Buzzworthy T&Cs
- Worksheet
- Pencils or markers

The activity is designed to help learners understand the ways in which personal data and media is used and shared by social media and other AI-powered platforms. You will be required to support learners in identifying various types of personal data that users might consent to share when creating a social media account. For more information, refer to the Educator Guide.

Adaptation

This activity takes approximately 40 minutes to complete. If you are short on time, consider:
- **Splitting the activity:** End the lesson after Slide 17 (once learners have filled in all bubbles except the third-party organisation one) and continue in the next lesson
- **Using a pre-filled worksheet:** Skip Slide 15 ('Decoding the Terms & Conditions') and provide learners with the pre-filled worksheet ('Data detective – Learner worksheet pre-filled') where the data bubbles are already completed

Outline plan

Timings are rough guides. Adjust to suit your environment.

Introduction (Slides 11–14) – 10 minutes

Display: Slide 11

Do: Have the learners form groups of 2–3 learners.

Display: Slide 12

Ask: "What data do you think social media platforms collect about their users?"

Guidance
Get learners to discuss within their groups. Prompt them to think about both personal data that a user gives when signing up, and data that is generated by using the platform.

Example answers:
Personal data – Name, email, date of birth…
Usage data – Views, likes, photos/videos, country, IP address…

Display: Slide 13

Explain: Their fictional friend Aya's situation. Buzzworthy is fictional, you might want to explain this if learners ask.

Meet Aya

Aya is at a café with her best friend and they've just had a delicious milkshake.

Aya loves sharing fun moments like these on Buzzworthy, the social media platform she is on.

She takes a picture of the milkshake and posts it.

Display: Slide 14

Explain: The two types of content Aya is seeing.

Do: Distribute (digitally or physically) the worksheet and the Buzzworthy Terms and Conditions.

Meet Aya

A few hours later, Aya notices two things in her feed that have made her curious:

- Posts about local cafés in her city
- Ads for a new milkshake at a fast food chain

> Aya wonders how Buzzworthy has selected this content to show to her…

Data map (Slides 15–20) – 20 minutes

Display: Slide 15

Do: Instruct learners to complete **Task 1.1**, to read the Terms and Conditions and write the data collected on the worksheet.

Decoding the Terms & Conditions

1.1 Let's investigate!

Read Buzzworthy's Terms & Conditions and uncover what data is collected in section **1. Personal Data Collection**. Add this data to your worksheet.

There are boxes for:

Personal data: Data shared when Aya signed up

Usage data: Data generated when Aya uses the platform

Guidance

You don't have to use the worksheet — learners can complete this activity on paper by drawing the boxes themselves.

The data is spelled out in the Terms & Conditions, and filled in the bubbles in the next slide. Encourage learners to ask about any terms they do not understand, and use the Terms & Conditions sheet to clarify.

Display: Slide 16

Do: Have learners complete **Task 1.2** and search out the AI systems Buzzworthy uses.

Guidance
Encourage learners to ask about any terms they do not understand. For example:
Third-party organisations: These are other companies that Buzzworthy works with, like advertisers, to make the platform better or show you ads.
Privacy rights: These are rules that let you control your data, like seeing what information Buzzworthy has about you or asking them to delete it.
Unauthorised access: When someone gets your information without permission.

The next slide explains what the AI systems do, so don't worry about explaining them now.

- -

Display: Slide 17

Explain: Use the slide to define what the two AI systems are.

Guidance
These two types of systems are common on social media sites. The image recognition system might shock learners, so make sure to let them know that Buzzworthy will anonymise this data before sharing it with other companies or third parties. Mention that the learners can read in the terms and conditions how Buzzworthy uses the image data to better target advertisements and content to users.

- -

Display: Slide 18

Do: Instruct learners to complete **Task 1.3** and find the third-party organisations that work with Buzzworthy.

Guidance

Learners might not know the term "third-party organisation" — explain that it is a company outside of the user and Buzzworthy (making it the **third** party in the agreement between the platform and user).

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Display: Slide 19

Explain: That advertisers often work with social media platforms to show adverts to relevant users.

- -

Display: Slide 20

Do: Have learners draw lines connecting the bubbles on their worksheets.

Guidance
The learners should draw a single line connecting the data collection boxes to Buzzworthy. Then have them discuss what data the platform uses for the two AI systems.

In particular, prompt them to consider the recommendation systems and what data a platform would use to make recommendations of content. How does their usage data, like the videos, posts, or music they interact with, influence what they see on platforms?

There is some great space for discussions about the ways they can control their social media feeds by using their data to control their experience.

Wrap-up (Slides 21–24) – 10 minutes

Display: Slide 21

How AI influences Aya's feed

As you wrap up your investigation, let's explore how AI systems in Buzzworthy use Aya's data to make predictions and recommendations to her.
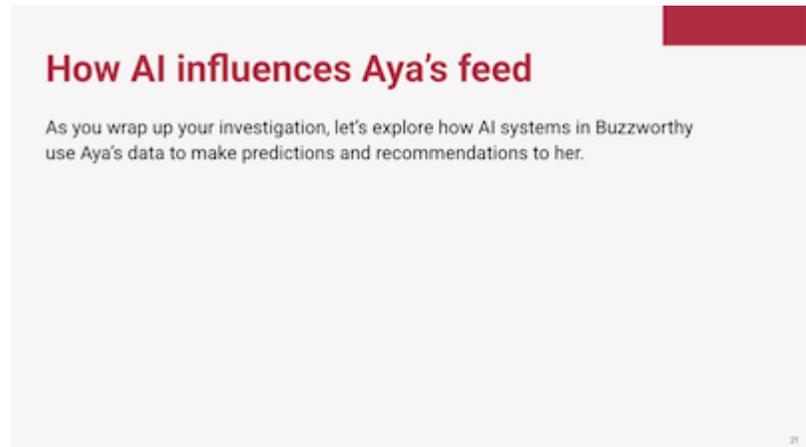
Explain: The next few slides will explain how AI systems control Aya's experience.

Display: Slide 22
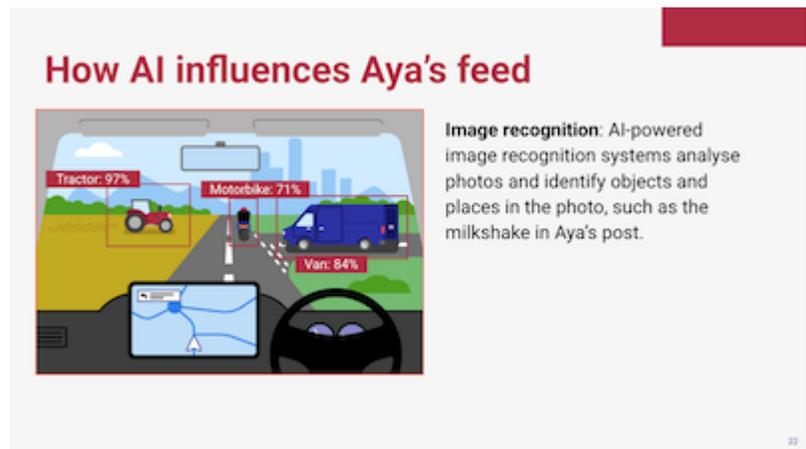
Explain: How image recognition analyses Aya's photos.

Ask: What other objects might appear in social media images?

How AI influences Aya's feed

Tractor: 97% Motorbike: 71% Van: 84%

Image recognition: AI-powered image recognition systems analyse photos and identify objects and places in the photo, such as the milkshake in Aya's post.

Guidance

Make sure to keep the conversation restricted to **objects** rather than people, encourage young people to consider people their age and what they might post on social media.

Display: Slide 23

Explain: How the recommendation system uses Aya's data.

Ask: What sorts of posts and ads might people see based on the objects mentioned earlier?

How AI influences Aya's feed

Recommendation system: Buzzworthy's recommendation system analyses data from Aya's social media activity. It uses this information to identify her preferences by comparing her to similar users.

Based on these patterns, the AI system can predict and recommend relevant content and targeted advertisements to Aya.

Guidance
Start drawing out opinions from the learners about how they might feel about being shown the ads or content and whether they would recommend taking action to stop it.

- -

Display: Slide 24

Do: Have learners discuss their recommendation and reasoning for Aya.

Ask: Groups to share their recommendations.

What should Aya do next?

Based on your investigation, help Aya decide how to handle her personal data and media on Buzzworthy.

Do you think Aya should:

| Share her data freely for better recommendations. | Adjust her privacy settings and choose who to share data with. | Limit her data sharing to the minimum necessary. |

Guidance
Make sure the learners know that all the options are valid choices and it is up to them to decide what they are comfortable with and what they would say to Aya based on what they have found out in the activity.

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Buzzworthy Terms & Conditions

Welcome to Buzzworthy! By using our platform, you agree to the following terms and conditions. Please read them carefully.

1. Personal Data Collection
When you use Buzzworthy, we collect certain personal data to make your experience better. The data we collect includes your name, handle, email address, phone number, location, country, gender, IP address, and any photos and videos you post.

We also collect activity data about how you use Buzzworthy, such as clicks, likes, comments, shares, saves, videos viewed, and watch duration.

2. Use of Personal Data
Your personal and activity data help us make Buzzworthy more fun and useful for you. We use this information to personalise your experience, suggest content you might like, and improve our services.

3. Sharing Personal Data
To keep Buzzworthy running smoothly and free to use, we sometimes share your data with others:
-   Third-Party Organisations: We work with trusted partners who help us with various tasks like improving Buzzworthy, maintaining security, and delivering personalised content. This includes advertisers, who may use your data to show you ads that are more relevant and interesting to you.

4. Use of AI Systems
Buzzworthy uses AI systems to improve your experience on the platform. Our AI systems analyse your activity — such as posts, likes, and photos — to understand your preferences. It helps us suggest relevant content and show you ads that match your interests. Our AI systems also detect objects in images you share, allowing us to recommend related posts or products.

5. Your Privacy Rights

We care about your privacy and want to keep your information safe. You have the right to:

- See the personal data we collect about you.
- Ask us to correct any incorrect information.
- Request the deletion of your data, although there may be some legal reasons we need to keep it.

6. Data Security

We use various methods to protect your data from unauthorised access and misuse. However, please understand that no system is completely secure, and we can't guarantee total security.

7. Changes to T&Cs

We may update these terms and conditions occasionally. When we do, we'll let you know by posting the new terms on Buzzworthy. If you keep using Buzzworthy after the changes, it means you accept the new terms.

Thank you for being a part of the Buzzworthy community!

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Data detective worksheet

Personal data	Usage data

Buzzworthy

AI system

AI system

Third-party organisation

![Raspberry Pi Foundation logo]

Data detective worksheet – pre-filled

Personal data	Usage data
name, handle, email address, phone number, location, country, gender, IP address, posted photos and videos	clicks, likes, comments, shares, saves, videos viewed, and watch duration

Buzzworthy

AI system

AI system

Third-party organisation
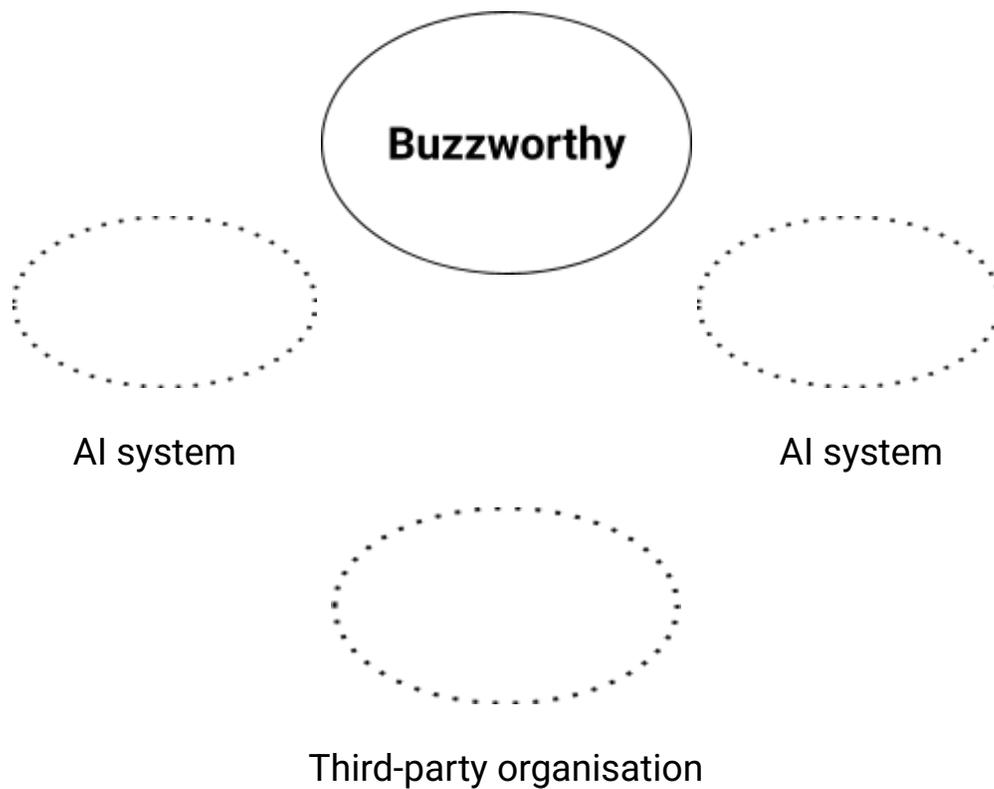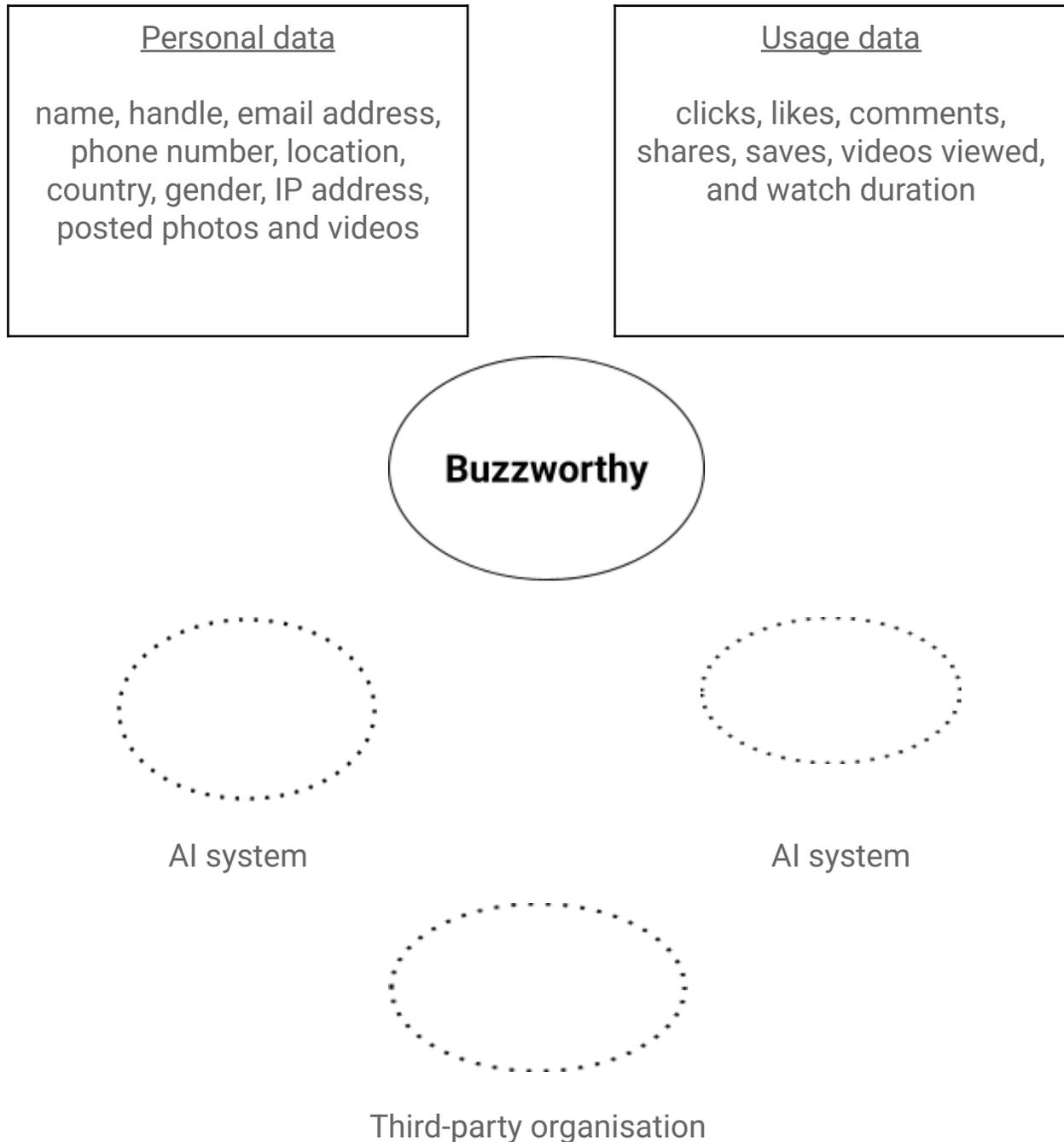
Unplugged activity 2: AI Business Boss – Activity guide

Introduction

In this unplugged activity, learners will partake in a game where they invent and pitch AI product ideas to the AI Business Boss, a fictional billionaire investor. The teams take on the role of AI start-ups, and have to design and develop an AI tool or application based on their 'ask' and 'must have' cards. Their goal is to convince the AI Business Boss about how their AI application complies with ethical, fair, and transparent data collection practices. Through this hands-on activity, learners will explore concepts of privacy and transparency in data collection and usage, as well as ethical decision-making in AI developments.

Key vocabulary

Artificial intelligence (AI), data collection and usage, transparency, ethics

Preparation

You will need:
- Slides (25–30)
- AI Business Boss cards (printed or digitally distributed, slides 31–56):
    - AI Business Boss instructions
    - Start-up instructions
    - 'Ask' cards
    - 'Must have' cards

The activity is designed to help learners understand the ways in which personal data and media are used for the development of AI tools and apps. You will be required to explain the rules of the game at the start of the lesson, moderate the pitches, as well as keep track of time.

Adaptation

This activity takes approximately 25 minutes to complete. We recommend running one round of the AI Business Boss activity, which will meet the learning objectives. However, depending on your class schedule you can extend the activity to include two or more rounds.

Outline plan

*Timings are rough guides. Adjust to suit your environment.

Introduction (Slide 25) – 2 minutes

Display: Slide 25

Do: Instruct learners to form groups of 2–3 learners.

Do: Select one of the teams to take on the role of AI Business Bosses

Do: Digitally or physically share the **Start-up instruction cards** to the AI start-ups, and the **AI Business Boss instruction cards** to the AI Business Bosses.

These are also in the slides.

> **Unplugged activity**
>
> ## AI Business Boss
>
> *Do you think you have what it takes to create a billion-pound AI start-up?*
>
> In this unplugged activity, you'll invent and pitch your AI product ideas to the very wealthy investor: the AI Business Boss.
>
> Get into groups of 2–3 people
>
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Game rules (Slides 26–28) – 8 minutes

Display: Slide 26

Explain: The rules of the game to the class.

> ## AI Business Boss game rules
>
> - Each AI start-up will draw one 'ask' card and one 'must have' card.
> - Start-ups have 5 minutes to incorporate both cards into a start-up idea and create a pitch.
> - Start-ups have 1 minute to pitch to the AI Business Boss.
> - The AI Business Boss has 1 minute to ask questions of the start-up.
>   - The AI Business Boss will invest in AI applications that ensure data collection is ethical, fair, and transparent.
> - The start-up with the most funding wins!
>
> 26

Guidance
Decide how many rounds you want to play with your learners. Keep in mind that each round is about 25 minutes long.

Display: Slide 27

Explain: The pitch instructions for the start-ups.

Pitch instructions for start-ups

Your team has **5 minutes** to create a pitch, and **1 minute** to pitch.

Each pitch must include:
- A description of the AI application
- What the key features and benefits are
- The specific privacy and safety challenge addressed

Guidance

Make sure learners understand what their objectives are. It will be useful to have the instructions on hand or on the screen, for teams to refer back to.

- -

Display: Slide 28

Explain: The instructions for the AI Business Bosses.

AI Business Boss instructions

As the AI start-ups are creating their pitches, think about what questions you want to ask:

- Are **privacy** and **safety concerns** addressed?
- Is all the data collected **necessary**?
- Is the start-up asking for users' **permission** to collect data?
- Is the users' data used **ethically** and **fairly**?

After the AI start-up has delivered their pitch, you have 1 minute to ask questions.

You have $100 million to invest, and should award start-ups with at least $10 million per successfully addressed point.

Guidance

The AI Business Boss has $100 million to invest (per round), and should invest in the most innovative and secure AI ideas. As guidance, the AI Business Boss could invest $10 million for each AI safety and privacy point they have successfully discussed in their pitch. You could guide the AI Business Boss teams to award funding appropriately.

Ready, set, create! (Slide 29) – 10 minutes

Display: Slide 29

Do: Give the teams time to create their pitch (5 minutes) and then have them pitch to the AI Business Bosses.

Repeat: Play another round and repeat the process. Make sure:
- To choose a new AI Business Boss team
- That the teams put their cards back on the deck
- That the AI start-ups draw new cards

Guidance
For drawing cards, either:
- Printed: Have a printed deck of 'ask' and 'must have' cards ready to pick cards from.
- Digital: Get learners to randomly choose a card from the slide deck, and note down the cards they have drawn on a piece of paper.

Keep track of time as the pitch creation is 5 minutes, each start-up should pitch their idea in 1 minute, and the AI Business Boss has 1 minute to ask questions.

At the end of the round, make a note of how much funding each start-up team got. In case you want to run multiple rounds, this will help you find out which teams got the most funding after the final round.

AI privacy pioneers (Slide 30) – 5 minutes

Display: Slide 30

Do: Instruct the learners to think about the questions individually, then share with their neighbour, and finally share with the class about their key takeaways from the class.

Ask: The learners for their key takeaways. Write them on the board, or have learners write them on notes to stick on the board.

Importance of privacy in AI applications

Think, pair, and share:

- What **innovative features** did you come up with to protect the user's privacy?
- What **challenges** did you face in **balancing functionality and privacy**?
- How important do you think **privacy is for developers** of AI tools and applications?

Discussion guidance: Your data and AI

Potential discussion topics:

- Why is your data valuable to companies that use AI models?

- What do you want content recommendations systems to do for you? What data are you willing to give up about yourself for them to do a good enough job?

- Identify an AI/data-driven system that you might have interacted with. What data did you provide it with? What data do you continue to provide it with?

- What is your responsibility, individually and collectively, regarding personal data when engaging or interacting with an AI model?

- When signing up to an app that collects personal information and details about your interactions with the app, how often do you read the terms and conditions (Never, Sometimes, Always)? Why is that?

Draw out

Within this session, draw out the following with the learners:

1. Computer systems, once designed using a rule-based approach, are now being designed using a data-driven approach.

2. To be aware of what is happening to the data that you provide to an app.

3. To be aware of the data privacy choices that you make when using an app.

Key message

The key message for this session is:

1. We now live in a data-driven world.

2. What data privacy choices will you make in this AI-powered world?