BT Group

AI & Customer Service:

Lesson 2

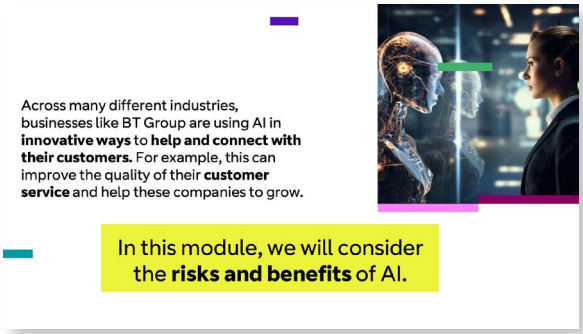
Resources

- PowerPoint presentation

Intro (5 mins)
Slides 2-7

Introduction

Use the slides to introduce the lesson, the module overview, and learning objectives. Make sure to recap the 'Big Thinking' question on slide 3: How is AI **impacting human interaction** in the world of work? **This will be touched on throughout the module.**



Resources

- PowerPoint presentation
- Pens
- Printed out sets of activity cards (1 per group)

Activity 1 (20 mins)
Slides 8-20

Boolean Logic

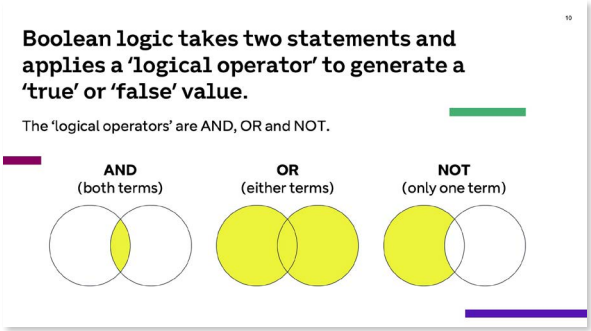
Explain that Boolean Logic is a type of algebra based on three logical operators: AND, OR, and NOT. It is often used in computer programming as the basis for which the programme make decisions.

Boolean Logic

Explain that Boolean Logic is a type of algebra based on three logical operators: AND, OR, and NOT. It is often used in computer programming as the basis for which the programme make decisions.

Slides 9-10:

- In Boolean logic all values are either 'true' or 'false'. We can think of true as 'yes' and false as 'no'.
- Boolean logic is like a set of rules that helps the computer make decisions based on these True or False answers.
- When you're coding, you often need to ask the computer questions and tell it what to do based on the answers. These questions are called **conditions**.



Slide 10:

There are three main rules in Boolean logic: AND, OR, and NOT.

Slide 11:

1. **AND**: This is like saying "Both things must be True for the answer to be True."

- **Example: "Is it raining AND is it cold?"**
  - If both are True (Yes), the answer is True
  - If one or both are False (No), the answer is False.

Slide 12:

2. **OR**: This is like saying "At least one thing must be True for the answer to be True."

- **Example: "Is it raining OR is it cold?"**
  - If at least one is True, the answer is True.
  - If both are False, the answer is False.

3. **NOT**: This is like flipping the answer. If something is True, NOT makes it False, and if something is False, NOT makes it True.

- **Example: "Is it raining?"**
  - If it is raining (True), NOT makes it False.
  - If it's not raining (False), NOT makes it True.

If students need more clarity on this particular operator, share this real-life example with them: Imagine a box of pens of different colours. Some are red and some are not red. The NOT logic is like saying 'I want to use a pen that is not red.' So, the logic would look at all the pens and if it is red, it will ignore, if it is not red it will consider it.

Slide 13:

- Give students an example of how a computer programme might use Boolean Logic.
- In a video game where a player can enter a secret room. The computer programme must check if the player has the key AND whether they are over level 5.
- Deciding what happens when a user clicks a button on a website
- Determining if a player has won a game
- Figuring out which emails go to spam

Slide 15: Boolean logic in chatbots

Explain to students that Boolean logic is fundamental to the functioning of chatbots, as it allows them to make decisions based on what the user writes. By evaluating statements as 'true' or 'false' the chatbot is able to direct the flow of conversation and choose responses.

Slides 16-17: Examples

Run through the examples on the slides to illustrate the use of Boolean logic by chatbots. Discuss how by using Boolean logic, chatbots can interact in a more meaningful and structured way, improving the user experience and making it feel more personal.

(OPTIONAL) Slide 18-19: Activity

- Divide the class into pairs or small groups
- Give each group a 'Boolean conditions challenge' sheet.
- Explain that students must choose the correct response from 'Response A', 'Response B', and 'Response C'.
- Students must then think about what the condition for the chatbot could be to produce this response, using what they have learnt about Boolean logic conditions.
- Show students the answers on slide 19 and ask them to discuss how they found the activity. Was it easy or difficult to create conditions for the tickets?

Slide 20: Discuss

What do they think the strengths and limitations of a chatbot are compared to a human customer service agent?

If you have time, you could share highlights from this article which discusses findings from a study demonstrating that some chatbots are more likely to answer incorrectly than respond with 'I don't know'. It also suggests that users of AI and chatbots aren't always able to easily recognise when answers are incorrect or misleading: https://www.nature.com/articles/d41586-024-03137-3?utm_source=Live+Audience&utm_campaign=e8bcdc14f7-nature-briefing-daily-20240926&utm_medium=email&utm_term=0_b27a691814-e8bcdc14f7-52555528

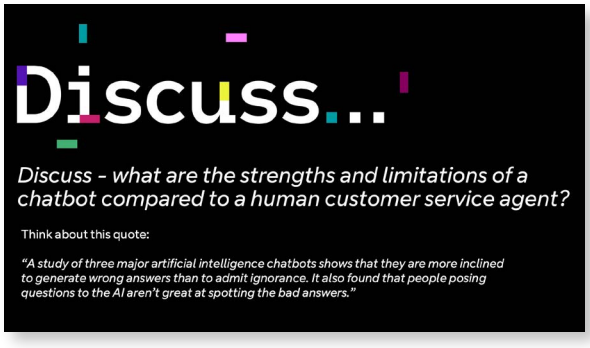
Highlight the following:

Strengths:

- Efficiency and availability: AI-powered chatbots and virtual assistants can reply immediately and 24/7, this is great for common, repetitive questions.
- Consistency: The AI can provide consistent responses, and has accurate technical responses ready, whereas humans make errors and can provide inaccurate information or might just not know the answer

Limitations:

- Complex problem solving: AI can struggle with issues that fall outside predefined scripts or that require critical thinking
- Can't guarantee correct answers: AI might not always have the right answer as questions become more complex, so users need to use critical thinking to recognise when this might be the case



Resources

- Printed out role play cards

Activity 2 (20 mins)
Slides 22-23

Activity: AI chatbot role play

Slide 22:

- Divide the class into pairs
- Explain that one student will act as the AI chatbot and another student as the customer.
- Give out the role play cards
- Explain that there are two types of card - customer scenario cards and AI chatbot responses.
- The student acting as the customer should read the scenario and then come up with a statement to say to the chatbot to match. For example, if the scenario card says: 'You have placed an online order for some new clothes. However, after confirming and paying for your order, you realised that you've ordered one item in the wrong size. You use the shop's chatbot facility to see if you can quickly amend the order before it ships.
- The customer might say 'I have just placed an order but one of the items is in the wrong size, please can you help?'
- The AI chatbot must choose from their cards to build an appropriate response. E.g. they might put together 'Thank you for getting in touch' and 'I'm sure I can help you with that'.
- The student acting as a customer grades how they feel after the interaction: 'unsatisfied', 'neutral' and 'satisfied'

Slide 23: Reflect

Bring the class back together and discuss the activity. Ask the students that acted as the AI chatbot if there were some enquiries they would have responded to differently as a human agent.

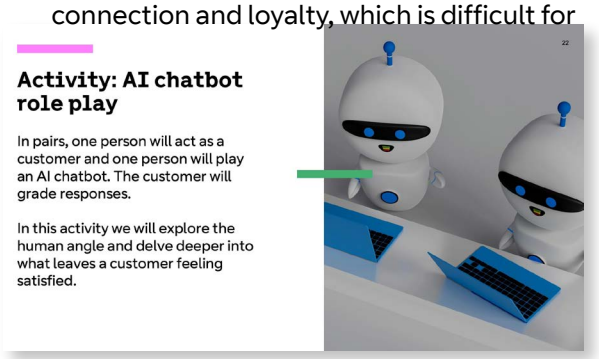
Explain that many AI chatbots can build their own responses, but they can only use language in the way they have been trained to, which is based on the examples they have seen. They cannot make totally new types of response, which is what was mimicked in this activity by having the statement cards that they used to construct their responses.

Prompt questions:

- What can a human offer that AI can't?
- How could an AI chatbot be improved to give a more human-like interaction?

Encourage students to think about:

- Emotional Intelligence: Human interaction in customer service is not just about resolving issues; it's also about managing emotions - responding to a customer's frustration, anger, or sadness. Sometimes a chatbot might be able to solve a customers issue but they will still leave feeling annoyed or frustrated, a human might be able to reduce these negative feelings by demonstrating empathy
- Building Relationships: AI lacks the ability to build rapport with customers. Human interactions can create a sense of connection and loyalty, which is difficult for



Resources

- Computer or tablet (minimum 1 per group of 3)

Activity 3 (20 mins)
Slides 24-27

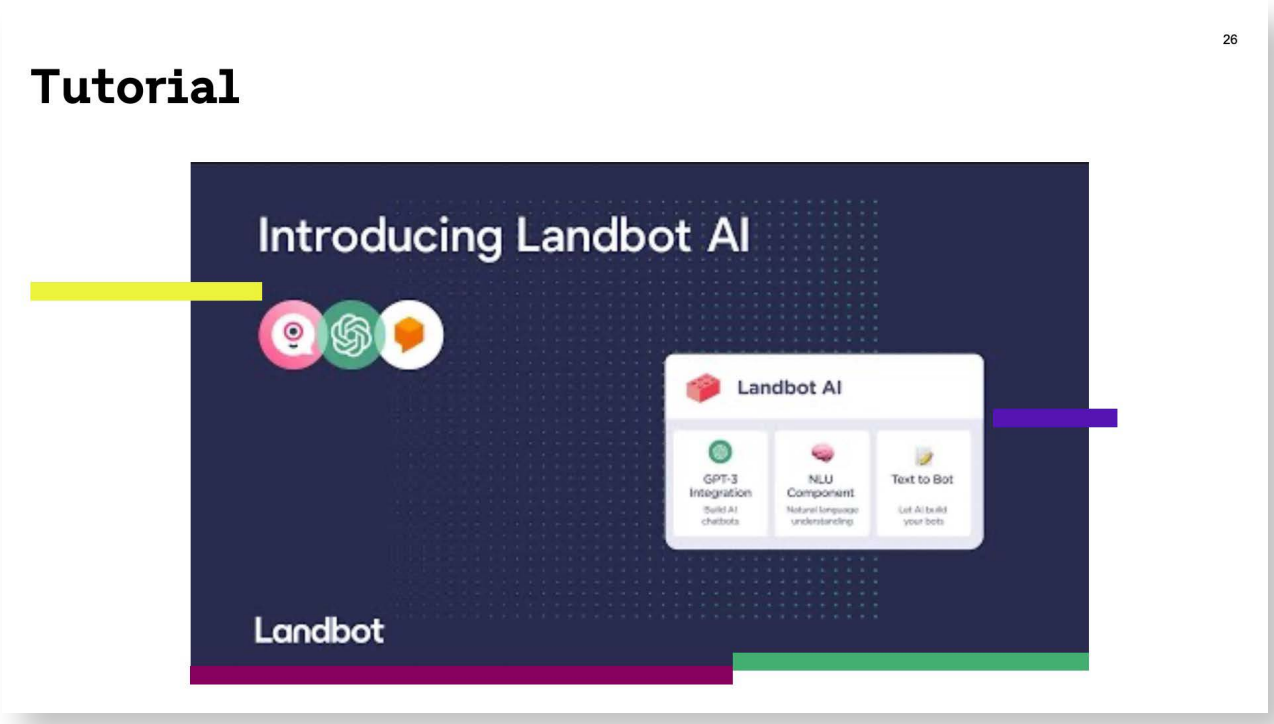
Project intro

Slide 24-25: Project intro

Explain to the students that in the next lesson they will be completing their own chatbot project based on today's lesson. Today they will need to skill up and practice working with the software they will use to make their chatbot in the next lesson.

Slide 26: Tutorial

- Play the tutorial video for Landbot AI for the students to watch
- Give out internet-connected devices
- Direct students to the website AI Chatbot Generator for Conversational Experiences | Landbot
- Support students to set up a log in
- Give the groups 10 minutes to play around with some of the functionality they saw in the tutorial video, and provide floating support



Resources

- PowerPoint presentation

Plenary (5 mins)

Reflect on learning

Slide 26:
Ask students to answer the following questions to recap their learning from the lesson:

- What is Boolean Logic?
- How do chatbots use Boolean Logic?
- What are some of the strengths and limitations of an AI chatbot?