

Create your own AI robot



Overview

This activity invites middle-school students to use their creativity while developing an ethical understanding of the use of artificial intelligence and was inspired by the creators of “How to Train Your Robot,” created by the I2 Learning and Personal Robots Group at the MIT Media Lab.

Students will use their creativity and critical thinking to imagine the unlimited benefits and potential risks associated with AI. First, to get students familiar with the application of AI, you will take them through a series of “Would you rather?” type questions. Then, they will use their imaginations to create their own robot who could help solve any problem, big or small.

Materials needed: Pen/pencil and activity sheet

Teacher’s prompts:

Introduce today’s lesson to students and let them know that they will learn about AI in the real world. Today’s objective is to:

- a) Identify any ethical dilemmas that could be encountered with AI;
- b) Create their own AI program or robot that could help solve a real-world problem.

Here are some general terminology to help students understand before beginning.

Artificial intelligence: any information technology capable of solving complex problems that would normally be attributed to humans or animals.

Robots: machines that learn or are taught by their environment or the data they are given, calculate programs and then perform an action.

Technology: the application of scientific knowledge to solve real-world problems.

Ethics: moral guidelines for how people in society should behave to be fair and responsible.

Discuss: Would you rather?

Ask students the following questions. Invite them to share their responses.

Question 1: Would you rather have an AI-powered virtual friend who’s always available to chat, play games and offer advice, or a real-life best friend who sticks by you, but who might sometimes argue with you and/or may not always be available? Explain why.

Question 2: Would you rather have an AI-powered tutor that can instantly solve any academic question and help with your homework, or a real-life person to help you through the questions providing guidance and support? Explain why.

Question 3: Would you rather have an AI personal assistant that can anticipate your every need and make your life convenient (but it knows every detail about your personal life and could spill the beans at any point)? Or would you rather rely on your own skills to handle tasks, keeping your privacy and life’s challenges up to you? (Privacy is often a concern with technology!)

Question 4: Would you rather have an AI generator that makes the best playlist of your favourite songs, or an AI generator that makes the best playlist of new songs you’ve never heard with a few of your favourites? Explain why.

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Student activity sheet:

It's your turn to create your own AI robot. You are the mastermind behind the creation and you have been tasked with creating a robot that can help to solve a problem, while remaining ethical. Your robot would also respect people's privacy.

Fill out the following prompts and start dreaming up your own AI masterpiece.

What problem are you looking to solve?

What is your robot's name?

How would your robot help to solve your problem?

Who does your robot help?

What features does it have?

What are its superpowers?

What information do you need to feed your robot so it can do its job?

Does your robot protect people's privacy? Why or why not?

What are some ethical considerations you had in creating your robot?

Is it possible that your robot could make a mistake? Why or why not?

Draw your robot.