AI and Data

How can you create a trustworthy machine?

COMMUNICATION PROJECT

Activity created by

THE ROYAL SOCIETY

Project brief

In this project you will select a target audience and create a survey to find out what they know & feel about machine learning and what would be needed to create machine learning systems that people trust. You will then use your survey findings to make recommendations to developers to ensure artificially intelligent computer systems are trustworthy.

Consider the following questions. How far would you trust a machine to:

- help with your shopping?
- teach you a foreign language?
- diagnose an illness?
- post photos on your social media page?
- drive your car?

For each one, consider how *useful* it would be for a machine to carry out the task and what value or *risks* there might be in using these systems.

You need to find out how other people feel about machine learning and what they would consider a 'trustworthy' machine too.

Do some research into machine learning to find out what it is, how it relates to people's lives and what people might have different views about. What might computers be able to do for us in the future? What might the risks or opportunities be?

Next you need to create your survey. Make sure your questions are balanced and unbiased. Think of ways you could make your survey interesting and engaging and allow people to express their views on a scale.

Once you have collected together the responses you will need to present the results and recommendations in an informative way.

Things to think about

- What do you need to understand about machine learning and AI in order to carry out this project?
- What makes systems trustworthy or not?
- How much do your audience know about machine learning?
- What are people's main concerns about machine learning?
- How important is it to ask the public what they think?

Useful resources

- royalsociety.org/topics-policy/projects/machine-learning/what-is-machine-learning-infographic/
- royalsociety.org/topics-policy/projects/machine-learning/machine-learning-in-the-world-around-you-infographic/
- sciencebuddies.org/science-fair-projects/references/how-to-design-a-survey

Health and safety

To avoid any accidents, make sure you stick to the following health and safety guidelines before getting started:

- find out if any of the materials, equipment or methods are hazardous using science.cleapss.org.uk/Resources/Student-Safety-Sheets/
- assess the risks (think about what could go wrong and how serious it might be);
- decide what you need to do to reduce any risks (such as wearing personal protective equipment, knowing how to deal with emergencies and so on);
- make sure there is plenty of space to work;
- clear up slip or trip hazards promptly;
- make sure your teacher agrees with your plan and risk assessment.