



AI Adventures:
Exploring the World of Smart Machines
STUDENT GUIDE

LESSON 4

Understanding AI Bias



**JA
Canada**

Member of
JA Worldwide

Lesson 4:

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OVERVIEW

Wait a second... can a robot be unfair? In this lesson, you'll explore an important idea called "bias." You will discover how it can affect the decisions AI makes and why it's so important to teach our AI helpers to be fair to everyone.



KNOWLEDGE CHECK

Place a check mark (✓) next to the correct answer.

1. An AI is being built to help a company hire new workers. The AI is only shown pictures of men who are doctors. What might happen when a woman applies for a doctor's job?

- ☐ a) The AI will know she is qualified because it is super smart.
- ☐ b) The AI will ask the programmer for help because it has learned to be fair.
- ☐ c) The AI might get confused or make an unfair choice because it has never "seen" a woman doctor before.
- ☐ d) The AI will hire her because it knows that being fair is the most important rule.

2. We are helping to train an AI that recognizes different types of animals for a zoo's website. What is the BEST way to make sure our AI is fair and doesn't have a bias?

- ☐ a) Only show the AI pictures of the most popular animals, like lions and tigers.
- ☐ b) Show the AI cartoon drawings of animals instead of real photos.
- ☐ c) Only show the AI pictures of animals that live in Canada.
- ☐ d) Show the AI lots of pictures of all kinds of animals from all over the world, big and small.

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REFLECTION ACTIVITY: AI FAIRNESS FORUM

Mission:

Brainstorm your answers to these big questions about fairness.



1. Why is it important?

Why is it so important for AI to be fair to everyone?

2. Make a Rule:

If you could create one rule to for all AI to follow to make sure it's being fair, what would it be?

3. Share an Idea:

What is one idea you have for making sure the information we teach AI is fair and includes everybody?

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LESSON 4 ANSWER KEY

1. c
2. d



GLOSSARY

Artificial Intelligence (AI): A technology that gives computers and robots a 'brain' to think, learn and solve problems in a way similar to, but different from, the human brain.

Bias (in AI): An unfair leaning towards one thing over another. When an AI is biased, it makes unfair decisions because it learned from unfair data that wasn't complete or didn't include everyone.

Data: All the information (like pictures, words, and numbers) that we give to an AI to help it learn.

Ethics: The rules or ideas that help us decide what is right and wrong. For AI, it means making sure it is used in a way that is fair, safe, and helpful to people.

