



Success Through AI Mastery
STUDENT GUIDE

LESSON 6

AI's Integral Role in Entrepreneurship & STEM



JA
Canada

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OVERVIEW

In this lesson, you will see how AI acts as a catalyst for innovation in business and science. You will explore how AI helps with data analysis and automation, and look at real-world examples of Canadian companies using AI to solve problems.



KNOWLEDGE CHECK

Instructions: Place a check mark (✓) next to the correct answer or write your answer in the space provided.

1. A Toronto-based startup wants to help local restaurants reduce food waste. They plan to use AI to analyze past sales data, weather, and local events to predict exactly how much of each ingredient a restaurant should order. Which key entrepreneurial advantage is this startup leveraging?

- ☐ a) Using AI to automate simple, repetitive physical tasks in the kitchen.
- ☐ b) Using AI for data analysis to make smarter, more strategic decisions.
- ☐ c) Using AI to create more engaging and interactive menus for customers.
- ☐ d) Using AI to design a new restaurant logo.

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2. Researchers at a Canadian university are studying climate change. They have decades of satellite imagery of arctic ice caps but don't have time to manually analyze every image. How could AI play a transformative role?

- ☐ a) AI could write the final research paper for them automatically.
- ☐ b) AI could use Computer Vision to rapidly analyze the images, identifying patterns and measuring changes over time.
- ☐ c) AI could create a more efficient schedule for the researchers to manually review the images.
- ☐ d) AI could order new computer equipment for their lab.

3. Which of the following are common challenges faced by AI startups? (Select all that apply)

- ☐ Securing access to large, high-quality datasets for training models.
- ☐ Managing the high cost of computing resources needed for AI development.
- ☐ Finding enough simple, repetitive tasks to automate.
- ☐ Addressing ethical concerns like bias and data privacy in their products.

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ACTIVITY: CREATE AN ELEVATOR PITCH

Design your AI Companion: Step 6

If you were to turn your AI companion into a product for the Canadian market, you'd need to convince investors it's a good idea.

1. Identify Your Audience:

Who would your target customers be (e.g., high school students, busy parents, artists)?

2. Write Your Pitch:

In a few sentences, write an "elevator pitch" that explains what your product does and why it's valuable. (e.g., *"StudyBuddy is an AI tutor for high school students that creates personalized study guides from class notes, helping them save time and ace their exams."*)

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LESSON 6 ANSWER KEY

1. b

2. b

3. Securing access to data, Managing high cost, Addressing ethical concerns.



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GLOSSARY

Artificial Intelligence (AI): The field of computer science focused on creating systems that can perform tasks that typically require human intelligence, such as learning, reasoning, and problem-solving.

STEM: An acronym for the fields of Science, Technology, Engineering, and Mathematics.

Entrepreneurship: The process of designing, launching, and running a new business, which often begins with an innovative idea to solve a problem.

Machine Learning (ML): A subfield of AI that gives computers the ability to learn from data and make predictions or decisions without being explicitly programmed for every single task.

Automation: The use of technology to perform tasks with minimal human assistance.

Computer Vision (CV): A field of AI that enables computers to "see" and interpret meaningful information from digital images, videos, and other visual inputs.

Natural Language Processing (NLP): A field of AI focused on enabling computers to understand, interpret, and generate human language, in both text and speech.