



Success Through AI Mastery

STUDENT GUIDE

LESSON 7

Career Paths in AI



**JA
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Lesson 7:

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OVERVIEW

In this final lesson, you will explore the diverse career opportunities in AI. You will differentiate between technical roles (like Data Scientists) and non-technical roles (like AI Ethics Specialists) and discuss the importance of responsible and ethical AI.



KNOWLEDGE CHECK

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

1. Draw lines to connect the roles to the correct category.

- Machine Learning Engineer
- AI Product Manager
- Robotics Engineer
- AI Ethics Specialist
- AI Consultant
- Data Scientist

Technical Roles

Non-Technical Roles

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2. A startup has collected a massive amount of messy, disorganized data. Before they can build a machine learning model, they need someone to build a reliable system to collect, clean, and prepare this data. Which role should they hire first?

- ☐ a) A Data Scientist
- ☐ b) A Data Engineer
- ☐ c) An AI Product Manager
- ☐ d) A UX/UI Designer

3. An AI company is about to launch a new hiring tool. They are concerned that their AI might unintentionally favour candidates from certain backgrounds. They need someone to investigate these risks and help design a fairer system. Which non-technical role is best suited for this task?

- ☐ a) An AI Ethics Specialist
- ☐ b) An AI Consultant
- ☐ c) An AI Product Manager
- ☐ d) A Marketing Manager

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ACTIVITY: SOLVE AN ETHICAL DILEMMA

Design your AI Companion: Step 7

Scenario: Your AI writing companion, which helps with grammar and style, detects that a user has just pasted a large section of text from a website directly into their school essay without providing a citation.

1. Identify the Conflict:

What is the ethical conflict for your AI? (e.g., Helping the user vs. academic integrity)

2. Propose a Rule:

What is one ethical rule you would program into your AI to handle this?

3. Define the Action:

Based on your rule, what specific action should the AI take?

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LESSON 7 ANSWER KEY

1. **Technical:** ML Engineer, Data Scientist, Robotics Engineer.

Non-Technical: AI Product Manager, Ethics Specialist, Consultant.

2. b

3. a



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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.

Data Scientist: A technical AI professional who analyzes complex data to find insights, builds predictive models, and helps organizations make data-driven decisions.

Data Engineer: A technical AI professional who builds and maintains the systems that collect, manage, and prepare large datasets, creating the "pipelines" that data flows through.

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.

Technical Role: A job in the AI field that typically requires hands-on programming, data analysis, or engineering skills to build and maintain AI systems.

Deep Learning (DL): A specialized subfield of Machine Learning that uses complex, multi-layered neural networks to learn from vast amounts of data and is especially powerful for tasks like image and speech recognition.

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