Artificial Intelligence from Scratch

Interactive Training Guide with Exercises & Quizzes

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What is Artificial Intelligence?

■ *Theory*

AI is the simulation of human intelligence in machines.

It includes reasoning, learning, and problem-solving.

■■ *Exercise*

Research 3 real-world AI applications and explain how they use AI.

■ *Checklist*

- Can define AI in simple terms.
- Know the difference between Narrow AI and General AI.
- Understand the role of data in AI.

■ *Quiz*

1. Which of these is NOT AI? a) Face recognition b) Calculator c) Chatbot d) Self-driving car

2. AI that specializes in a single task is called? a) Narrow AI b) General AI c) Superintelligence d) Weak AI

How AI Works – The Basics

■ *Theory*

AI systems learn from data through algorithms.

Neural networks are inspired by the human brain.

■■ *Exercise*

Draw a simple diagram of how data flows in an AI system.

■ *Checklist*

- Know what training data is.
- Understand that algorithms learn patterns.
- Familiar with neural networks basics.

■ *Quiz*

1. Which is essential for AI? a) Data b) Electricity c) Algorithms d) Both a and c

2. Neural networks are inspired by? a) Computers b) Human brain c) Internet d) Machines

How AI Will Change the Future

■ *Theory*

AI will transform jobs, creativity, and daily life.

It could bring both opportunities and ethical dilemmas.

■■ *Exercise*

Write a short essay: How could AI change your career in 10 years?

■ *Checklist*

- Understand potential job shifts due to AI.
- Recognize ethical implications.
- Can discuss both opportunities and risks.

■ *Quiz*

1. Which job is LEAST likely to be replaced by AI? a) Data entry clerk b) Creative artist c) Assembly line worker d) Customer support bot

2. The challenge of aligning AI with human values is called? a) Bias b) Transparency problem c) Alignment problem d) Security flaw