

1. Introduction to Artificial Intelligence
2. Machine Learning Basics
3. Introduction to Neural Networks and Deep Learning
4. Model Evaluation and Improvement
5. Ethics and Responsible AI
6. Getting Started with AI Programming

Study Guide:

Definition of AI: Understand that AI involves creating systems capable of performing tasks that typically require human intelligence, such as learning, reasoning, and problem-solving.

Types of AI: Differentiate between narrow AI (designed for specific tasks) and general AI (aiming to perform any intellectual task a human can).

Machine Learning Basics: Learn that machine learning is a core part of AI, enabling systems to learn from data and improve over time without explicit programming.

Applications of AI: Explore how AI is used in fields like healthcare, finance, and transportation to see its practical impact and relevance.

Module 1: Introduction to Artificial Intelligence

Key Topic: Definition of AI

What is AI?

Artificial Intelligence (AI) is a branch of computer science that focuses on building systems capable of doing tasks that usually require human intelligence. These tasks include things like learning from experience, solving problems, understanding language, or recognizing images.

The 20% You Need to Know:

- AI is about creating **smart systems** that mimic human abilities, like thinking or seeing, but it's not about making machines that "think" like humans.
- Key abilities of AI include:
 - **Learning:** Getting better with data or experience.
 - **Reasoning:** Making decisions or figuring things out.
 - **Problem-solving:** Tackling challenges.
 - **Perception:** Sensing the world (e.g., seeing or hearing).
 - **Language:** Understanding or generating words.

Why It Matters:

Grasping this definition gives you the foundation to understand what AI can do and where it fits in the world. It's the starting point for everything else we'll learn.

Simple Takeaway:

Think of AI as a super-smart tool that copies some human skills to get stuff done—no magic, just clever tech!

Why This Is Enough for Now

The 80/20 rule means we don't need to drown in details. Knowing that AI is about building systems to handle human-like tasks is the 20% that unlocks 80% of the big picture. We'll build on this as we go, but you've already got the core idea.

Your Next Step

You're off to a great start! We've nailed the **Definition of AI**, which is the first big piece of the puzzle. In this module, there's more to explore (like types of AI and machine learning), but let's make sure you're solid here first.