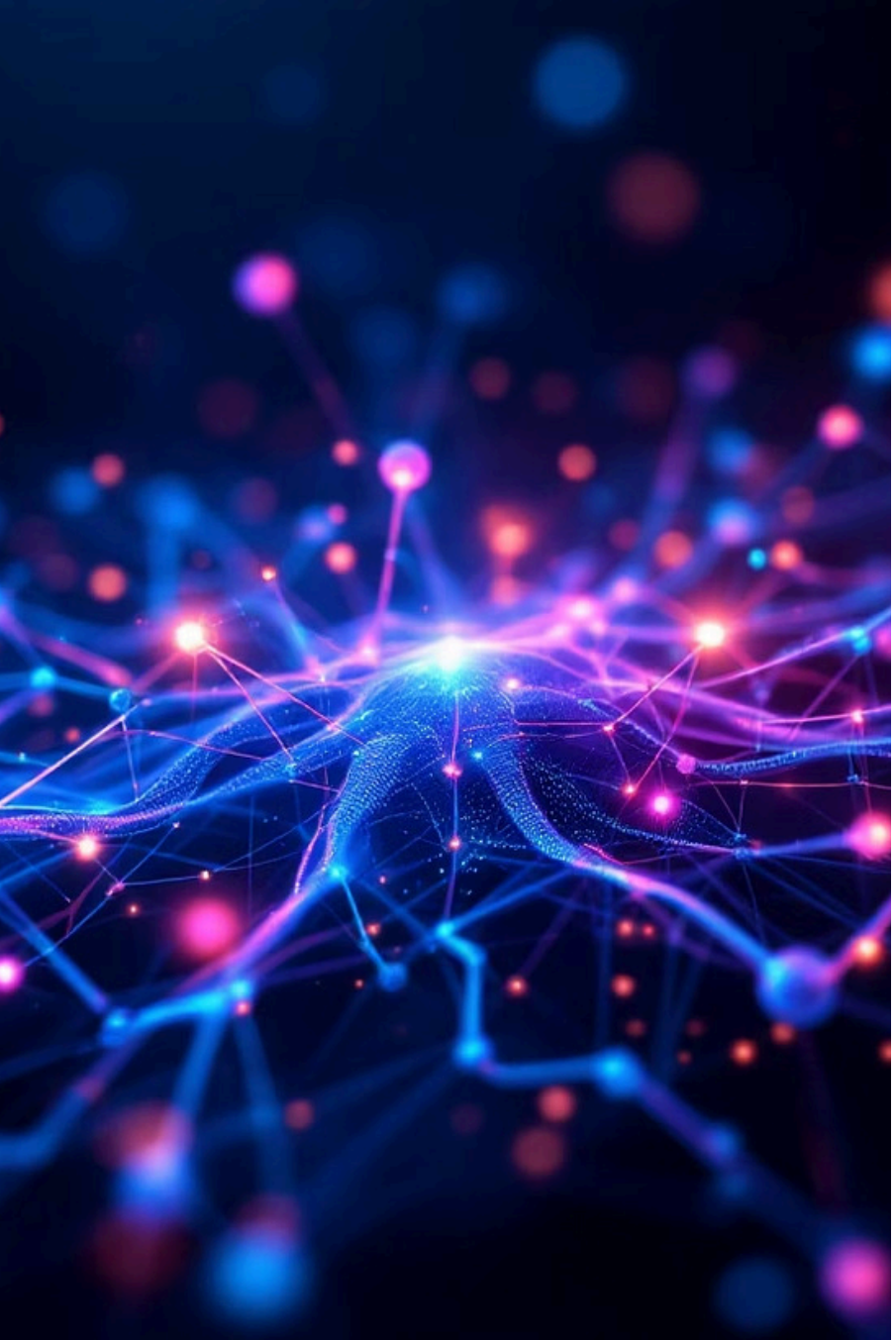
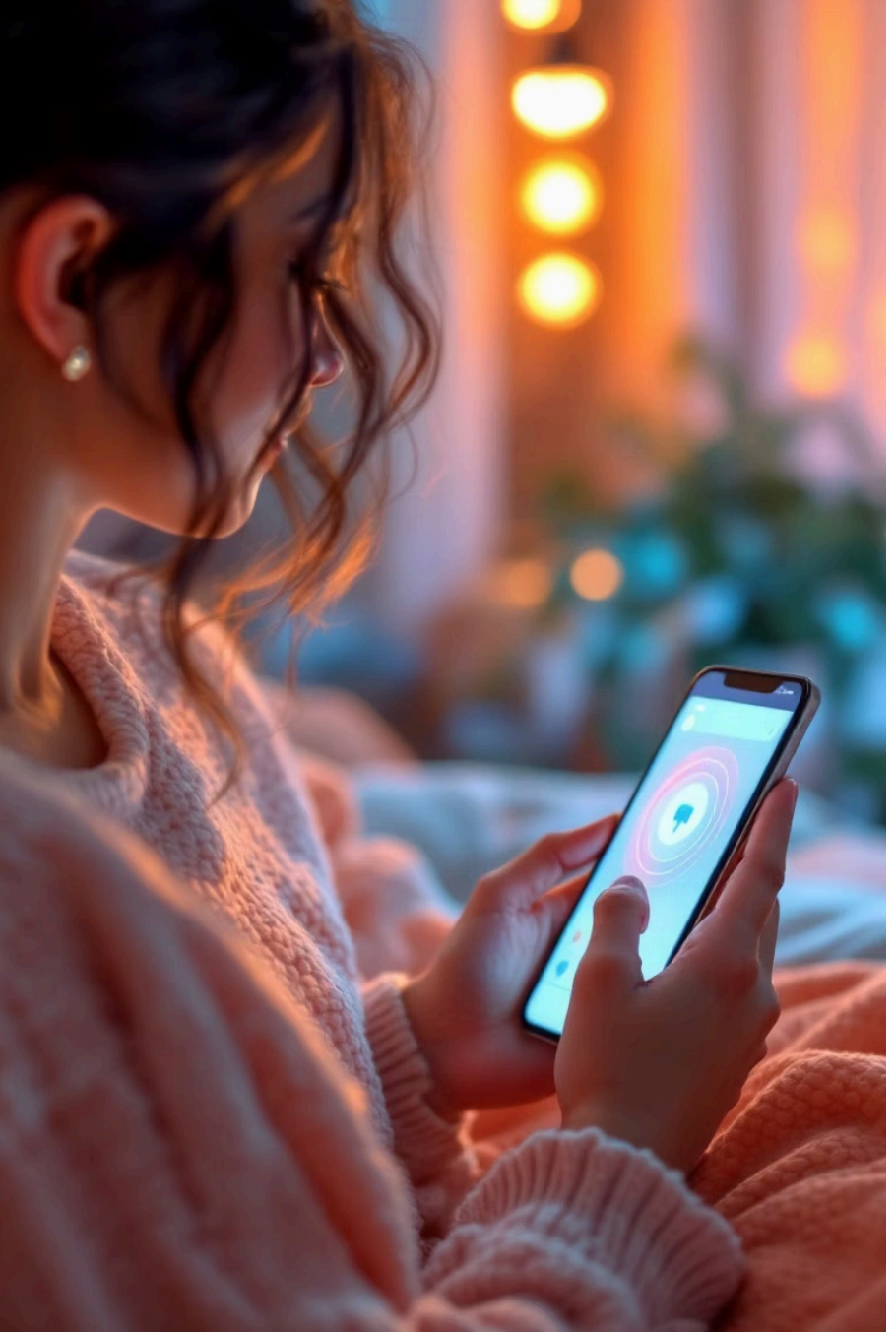


Understanding Artificial Intelligence (AI)

AI is all around us.

- What AI is
- How it works
- What it can and can't do
- Important things to think about



What is Artificial Intelligence?

What is it?

AI helps computers think, learn, and make decisions based on information around them.

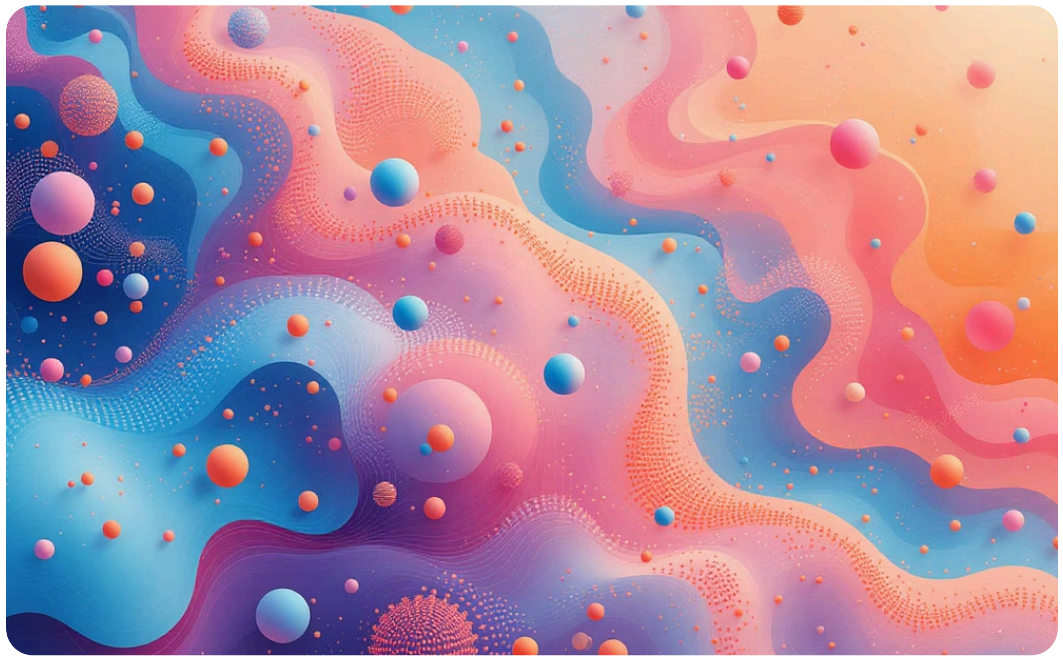
How it is now

Today's AI is built for specific tasks, not like the smart robots you see in movies.

Daily Uses

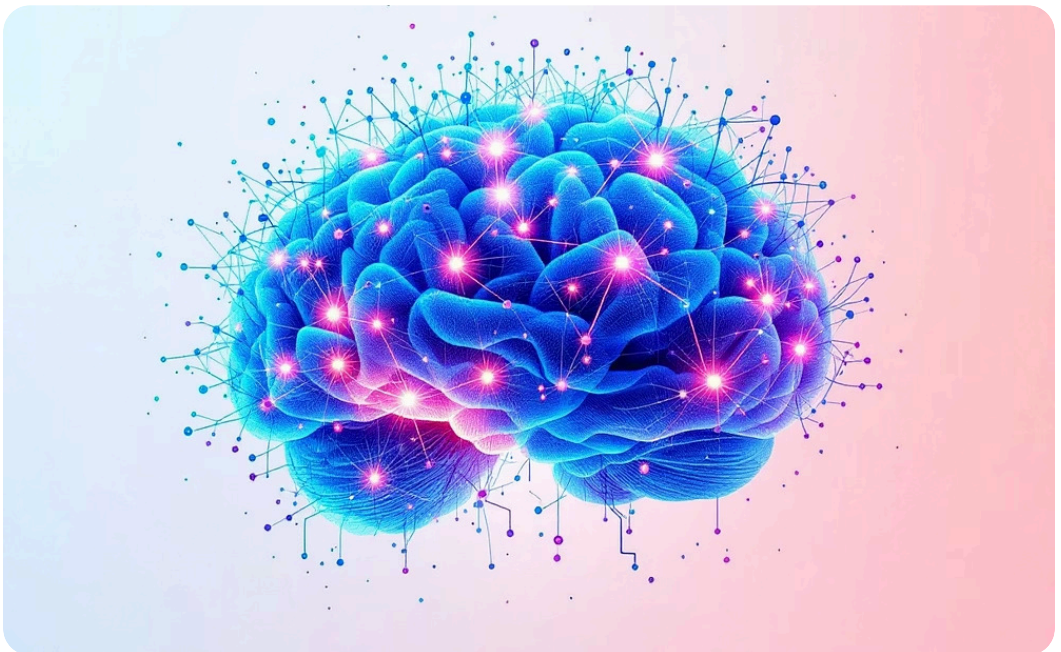
AI is in your search engine, photo apps, voice helpers, recommendation systems, and even helps find diseases or stop fraud.

How Does AI Work: The Machine Learning Approach



Machine Learning

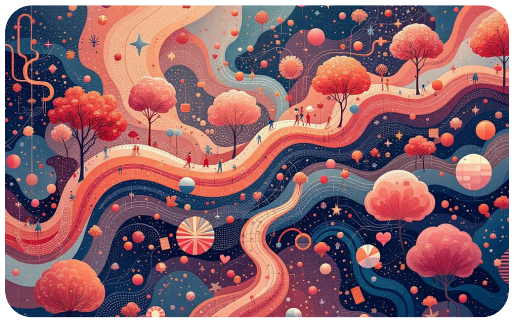
A core AI approach where algorithms learn from vast datasets to identify patterns and make predictions.



Neural Networks

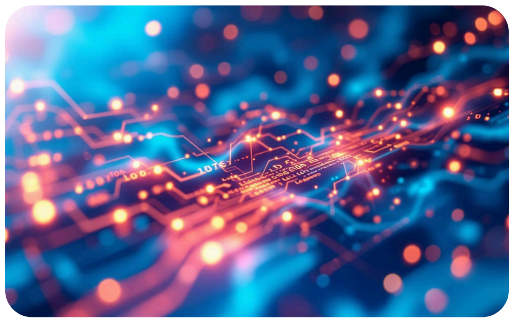
A type of machine learning that processes information through multiple "layers," extracting increasingly complex patterns, much like the human brain.

Training AI: From Data to Decisions



Data Collection

Gathering large datasets (images, text, etc.) relevant to the task.

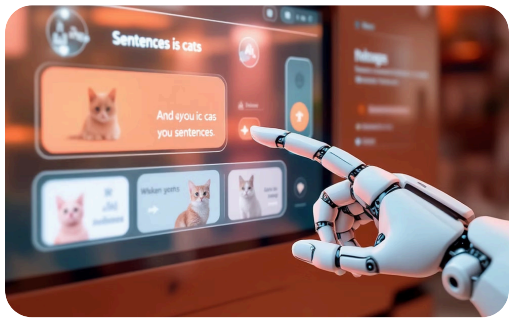


Algorithm Selection

Choosing appropriate learning models tailored for the specific problem.

Training Process

The algorithm learns patterns by analyzing examples within the training data.



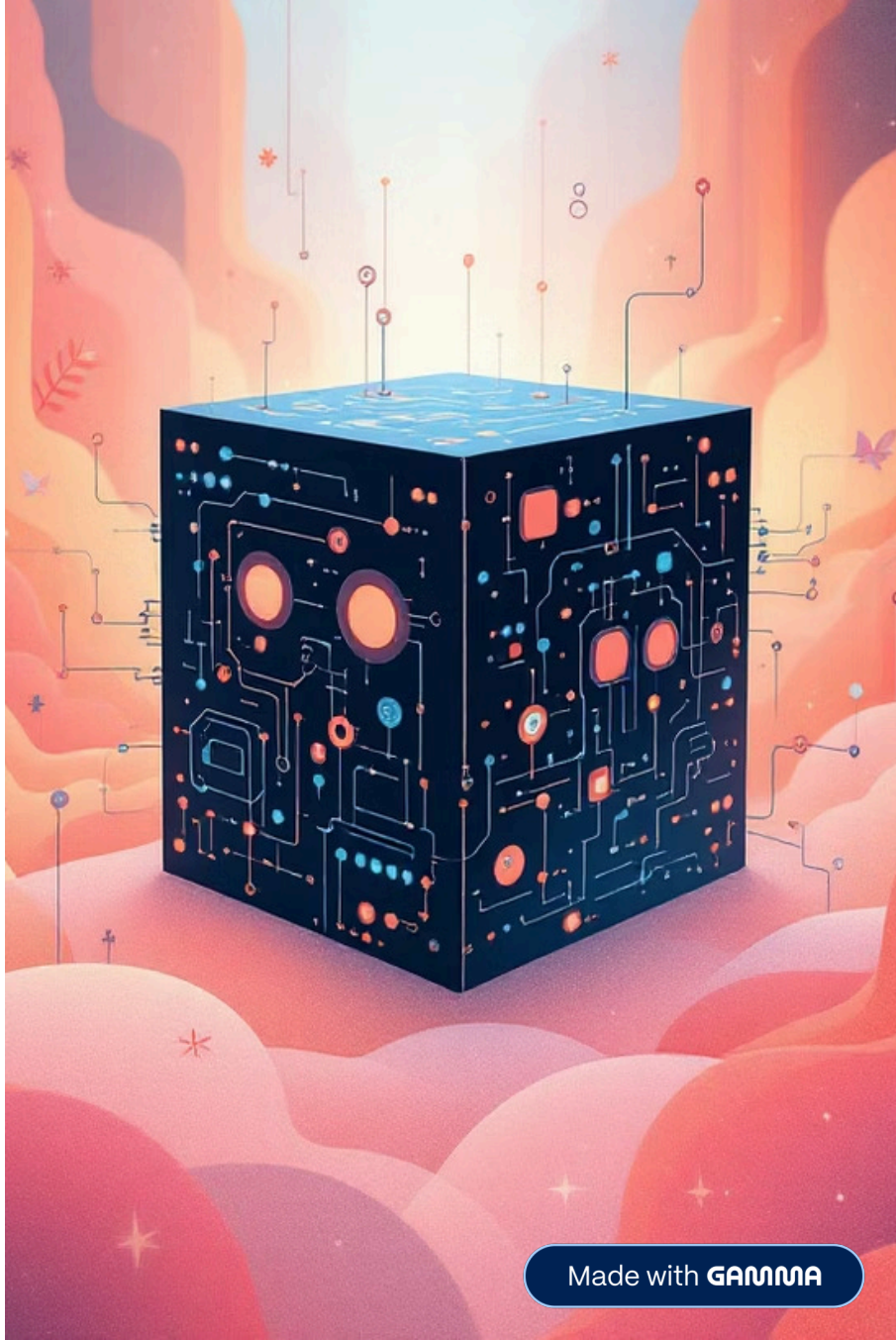
Application

The trained model can now recognize objects, complete sentences, or perform other defined tasks.

AI's "Black Box": We Don't Always Know How it Works

Even though AI is amazing, we often don't understand *how* it gets its answers. It's like a "black box"—AI can tell a cat from a dog, or write a correct sentence, but it can't tell us why it chose that way.

This lack of understanding can cause problems, especially when AI makes big decisions that affect people's lives. We need to know who is accountable.



AI's Flaws and Limitations

Missed Recognition

Self-driving cars might not see wheelchair users if they weren't in the learning data.

Biased Faces

Facial recognition works less well for people with darker skin if it mainly learned from lighter skin tones.

Unfair Decisions

AI used for things like loans, healthcare, or crime can repeat unfairness already present in society.

Creating More Equitable AI

Inclusive Data

Use training data that shows all kinds of people and real-world situations.

Diverse Workforce

Make sure AI teams have people from many different backgrounds and viewpoints.

Ethical Priorities

Think about the social, economic, and moral effects when deciding what problems AI should solve.

Living in an AI-Powered World

> "The more we understand how AI affects our lives, the better we can speak up for ourselves and others, working towards a fairer world."

As AI keeps changing our world, knowing what it can and can't do helps us make sure these powerful tools benefit everyone fairly.