

The Robots are Coming

AI: What it is and how will it impact our lives today and in the future

What is AI?

Artificial Intelligence is the ability of computers to learn from data and perform tasks that normally require human intelligence.

Example of tasks:

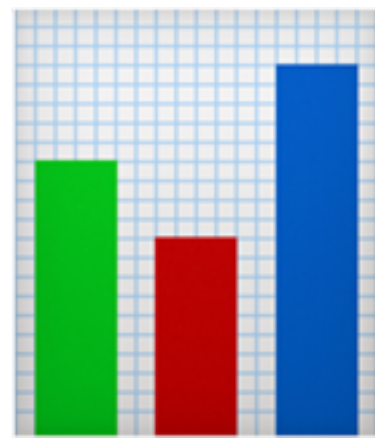
Recognising images

Understanding speech

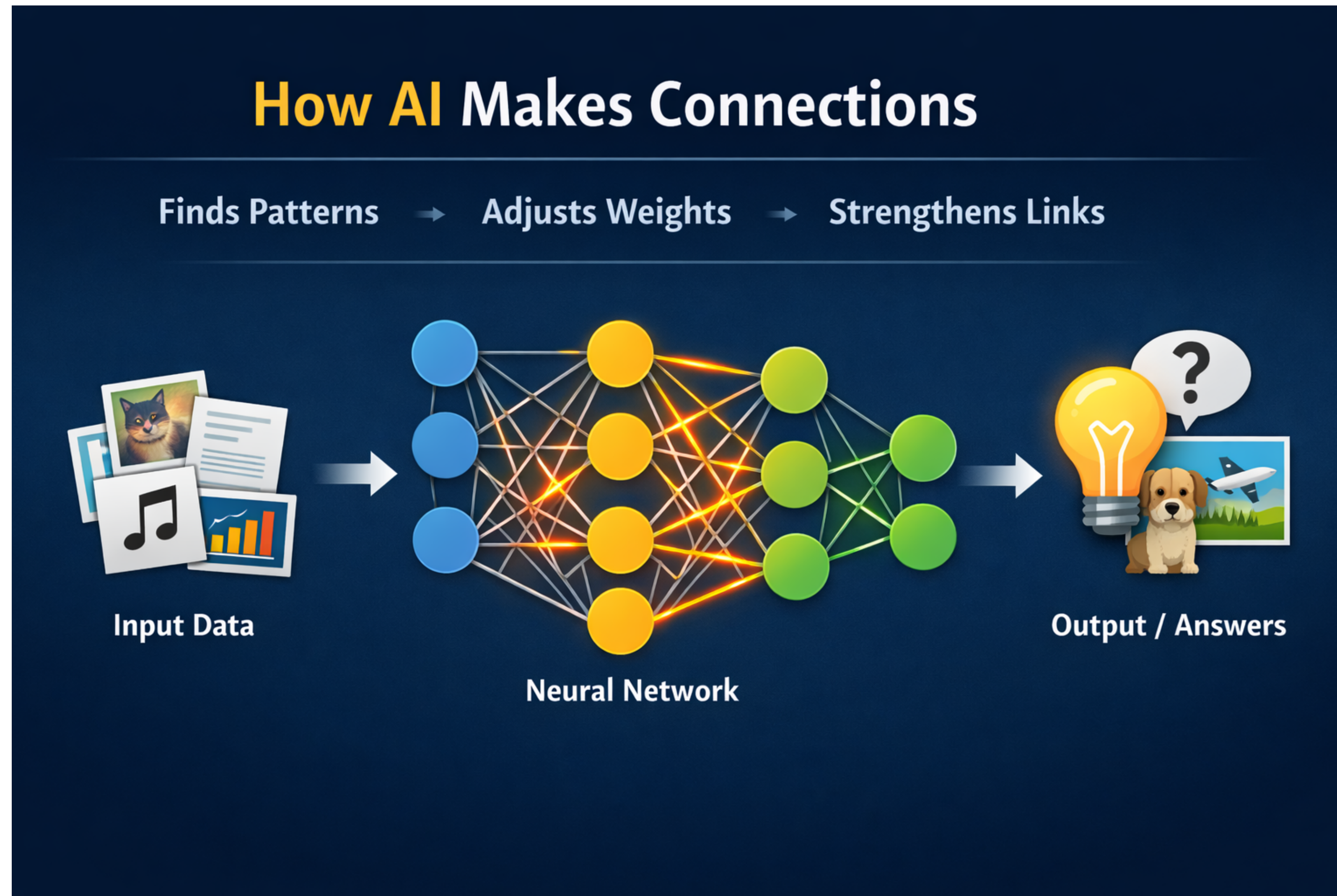
Making predictions

How AI Works

1. **Data** - large numbers of examples
2. **Learning** - algorithms find patterns
3. **Prediction** - the system applies what it has learned



AI makes connections by finding patterns in massive datasets and strengthening relationships between things that frequently appear together.



This is a very simple "neural network" diagram that illustrates connections visually.

How AI Makes Connections

1. It looks at huge amounts of data
Text, images, numbers, sounds, etc.
2. It notices patterns and relationships
For example, it may see that the words “doctor” and “hospital” appear together very often.
3. It adjusts internal weights
Inside many AI systems (especially those based on [Artificial Neural Network](#)) there are thousands or millions of tiny connections.
Each connection has a weight — a number showing how strong that relationship is.
4. Learning strengthens useful connections
When the AI gets an answer right, the useful connections get stronger.
When it’s wrong, they get weakened or adjusted.

Simple Analogy

Think of it like paths in a field:

At first there is just grass.

The more people walk a route, the clearer the path becomes.

Eventually you get obvious well-worn paths between places.

A language AI trained through Machine Learning might learn connections like:

“tea” — “cup” “rain” — “umbrella” “Paris” — “France”

When it sees the start of a sentence, it uses those learned connections to predict what is likely to come next.

Everyday Examples of AI

- Voice assistants (speech recognition)
- Email spam filters
- Online recommendations
- Medical image analysis
- Navigation and traffic prediction

Limits of AI

AI is powerful, but:

It depends on **good data**

It can **make mistakes**

It **does not understand as humans do**

It still needs **human oversight**

AI is best thought of as a powerful pattern-recognition tool that helps humans make better decisions

Why AI Matters

AI can help us:

Understand complex data that humans cannot easily analyse

Automate routine tasks and improve efficiency

Make better predictions in areas like health, climate and transport

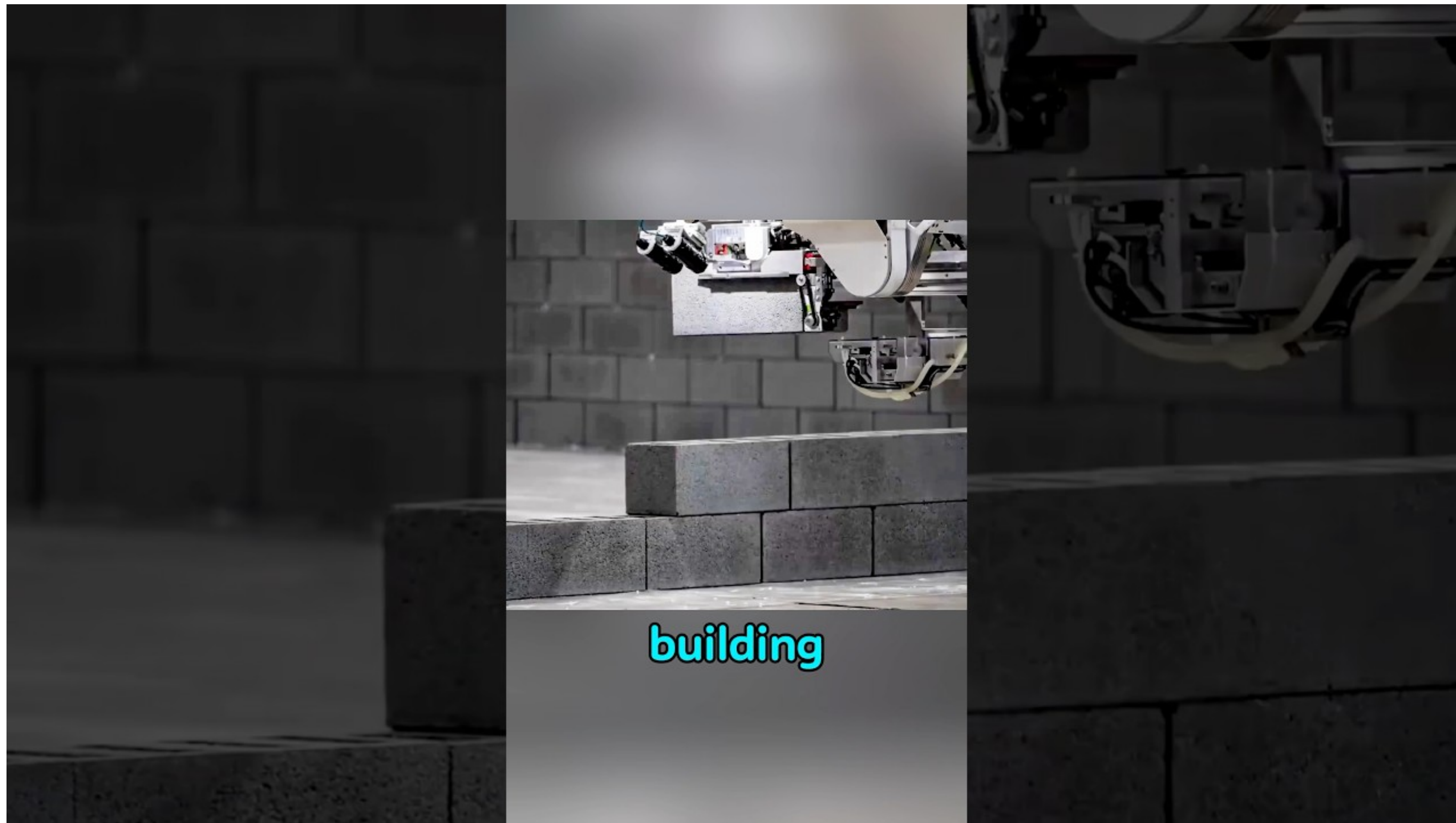
Create new tools and services that change how we live and work

All jobs are affected by AI

In 1900, nearly half of all jobs were in farming. Today it's just 2%. At the same time, around 60% of today's jobs didn't even exist in 1940.

Advances in technology have been the main driver of this transformation in work.

This is a real world example. The *Hadrian X* bricklaying robot in action:





Boston Dynamics robots dancing

We've largely solved how to make robots move. We haven't yet solved how to make them work.

Or have we?

That's it for now.

Time for a discussion