

# AI Fundamentals

 by Uwais Iqbal

## Who am I?


My name is **Uwais Iqbal**.

I've been designing and building AI systems in the legal tech space for close to a decade now.

I've held roles as a Machine Learning Engineer as well as a Senior Data Scientist across leading startups like Eigen Technologies and Thought River and at Thomson Reuters Labs.

The logo for Simplexico, featuring the word "simplexico" in white lowercase letters on a blue rounded rectangular background.

I'm the Founder & CEO of **simplexico - The Legal AI Consultancy**. We offer white-glove Legal AI education, design and development services and work with legal teams and law firms across the world.

We are on a mission to help legal professionals step into a future of collaboration with AI .

### Education

AI education and literacy through training sessions, workshops and educational programmes.

### Design

Use case discovery and design through interactive workshops and engagements.

### Development

Bespoke AI co-creation and implementation for legal built inside the firm.

# Introducing AI

## Defining AI



AI tends to get thrown about as a buzzword more than it should. You probably already know that AI stands for **artificial intelligence**.

With all of the hype around AI, a good place to start is by clearing up what we actually mean by AI.

Here's a dictionary definition of artificial intelligence:

*the theory and development of computer systems able to perform tasks that normally require human intelligence, such as visual perception, speech recognition, decision-making, and translation between languages.*<sup>1</sup>



In 1956, one of the founding fathers of AI, John McCarthy, defined artificial intelligence as

*machines that can perform tasks that are characteristic of human intelligence.*



We can think of artificial intelligence as a technique that *uses machines to replicate the problem-solving and decision-making capabilities of the human mind.*



## + Artificial + Intelligence

### Artificial

The *artificial* part in AI means that it's complete mimicry and imitation. There's nothing beyond that!



### Intelligence

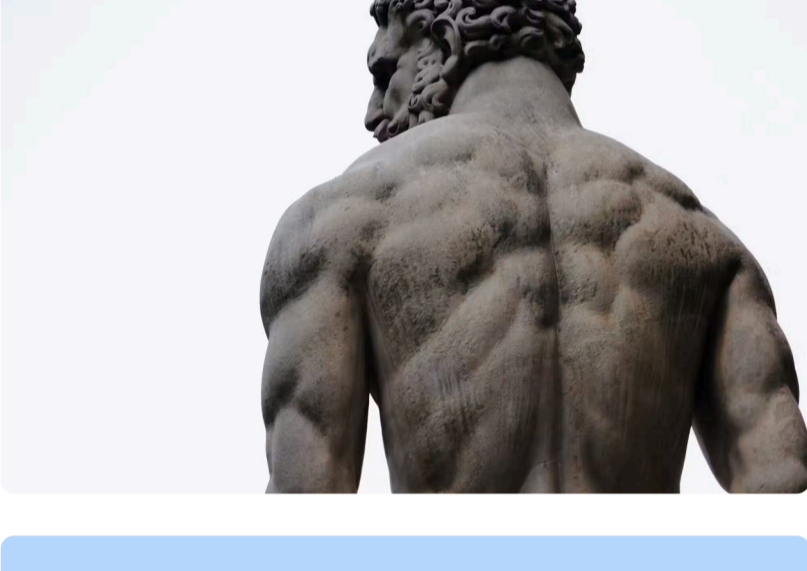
The *intelligence* part in AI means that we want to try and replicate some *uniquely human* capability around problem-solving.



## The Different Kinds of AI

A common categorisation of the different kinds of AI is based on what the AI system is capable of doing. Researchers usually break AI down into two kinds: **Strong AI** and **Weak AI**.

### Strong AI



Strong AI refers to an AI system which has reached a level of human intelligence.

The system can learn, perceive, understand, and function completely like a human being.

At the moment, we haven't developed such systems so Strong AI is still something purely theoretical.

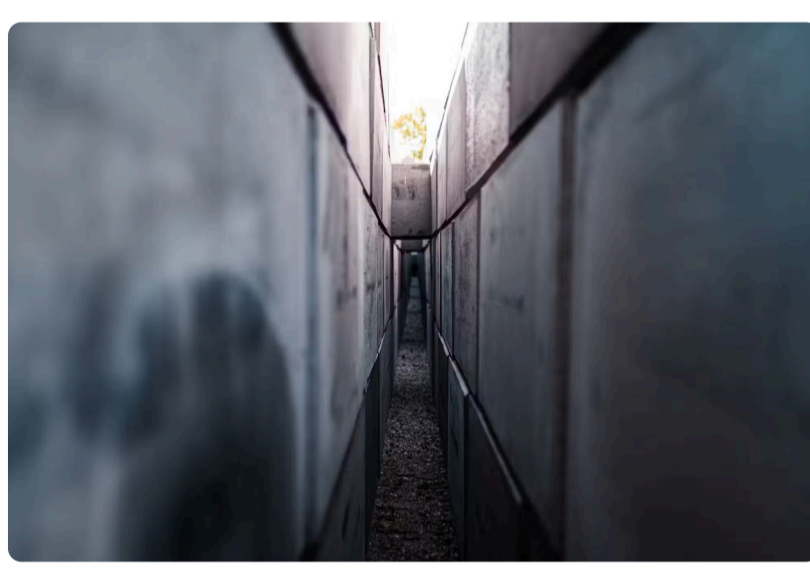
Strong AI is also known as **General AI** or **Artificial General intelligence (AGI)**.

Many researchers are sceptical as to whether Strong AI systems are even possible.

### Weak AI

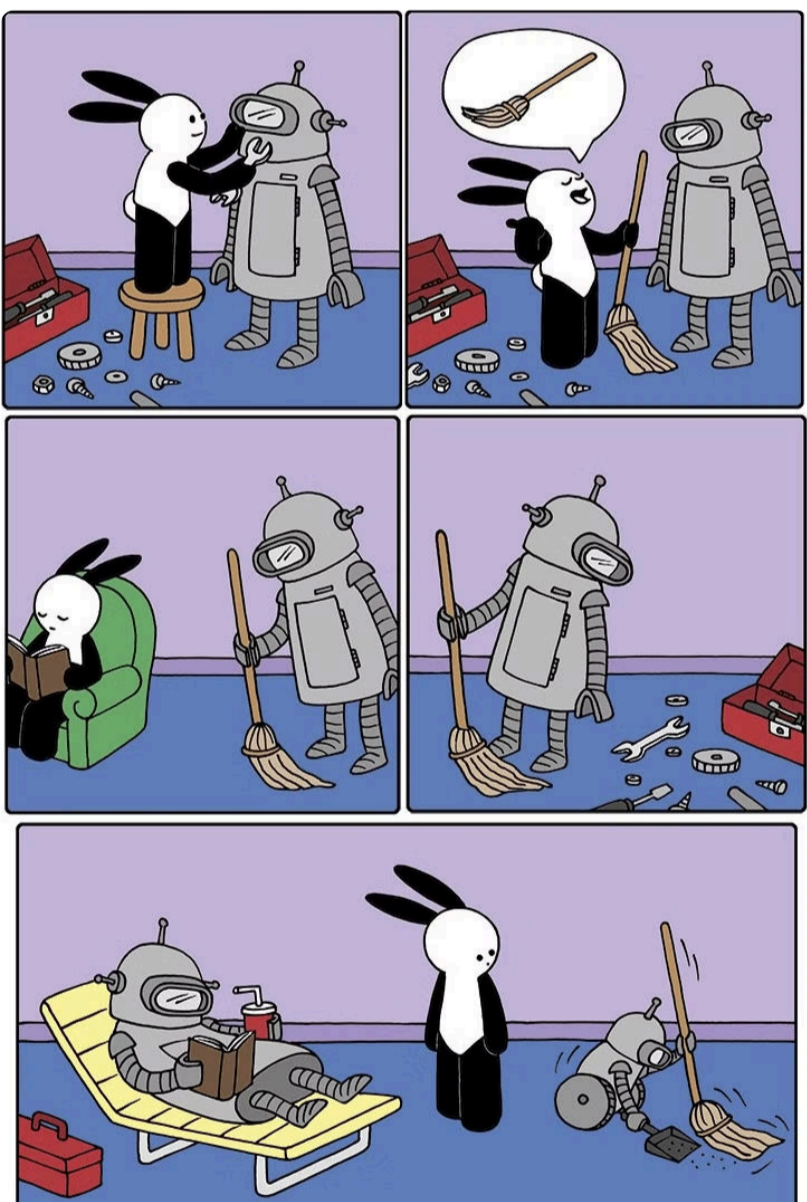
Weak AI refers to an AI system that can perform a specific and precise task like extracting a field from a contract or clustering a set of documents.

The AI systems we have today are all examples of Weak AI.



Weak AI is also known as **Narrow AI**.

## Thinking about AI



The comic on the left is sarcastic but it's actually quite accurate (apart from the final strip).

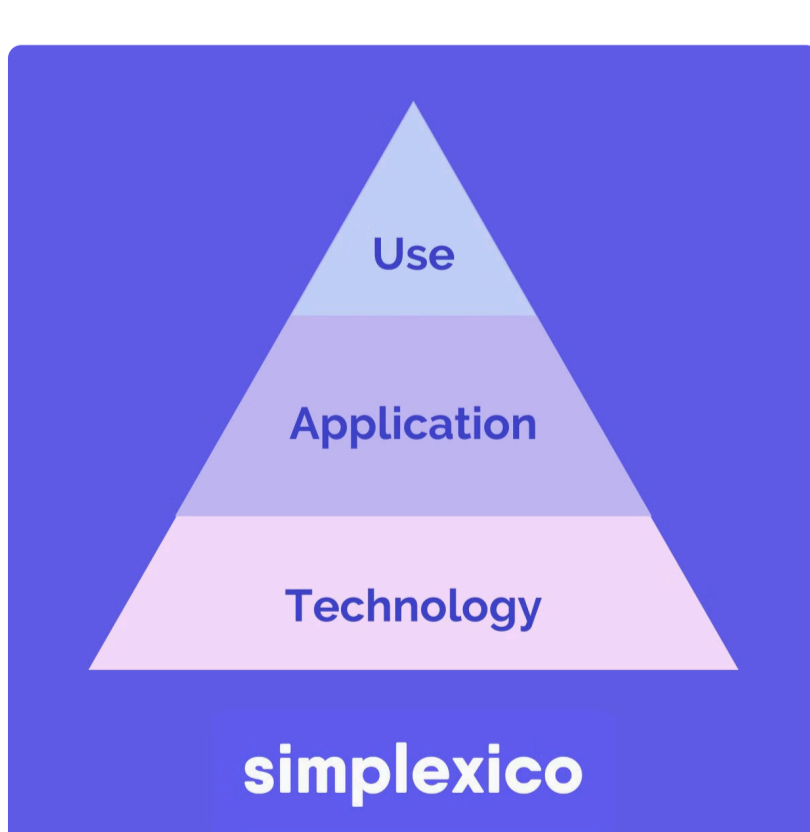
An easy way to think about where AI can be applied is to think of AI as a way of:

- Capturing Expertise** - What is the particular human cognitive skill you are looking to imitate through the use of a machine?
- Scaling Expertise** - How do you benefit from being able to replicate machines?

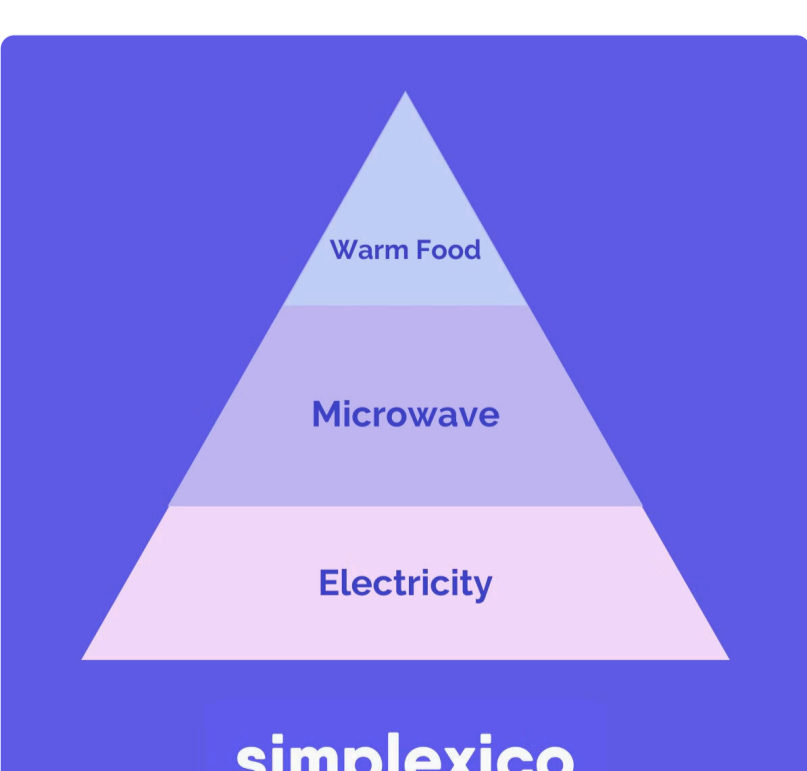
## Living with AI

We can think of AI in the same way we think of electricity. There are three main areas to consider:

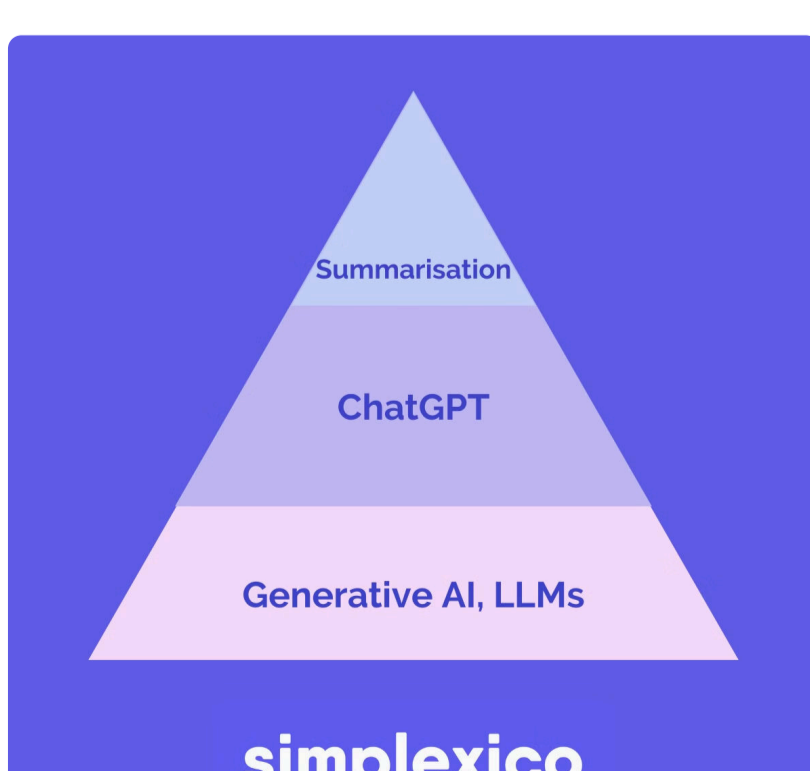
- Technology** - What is the underlying technology powering it?
- Application** - What is the application that makes use of the technology?
- Use** - What uses does the application enable?



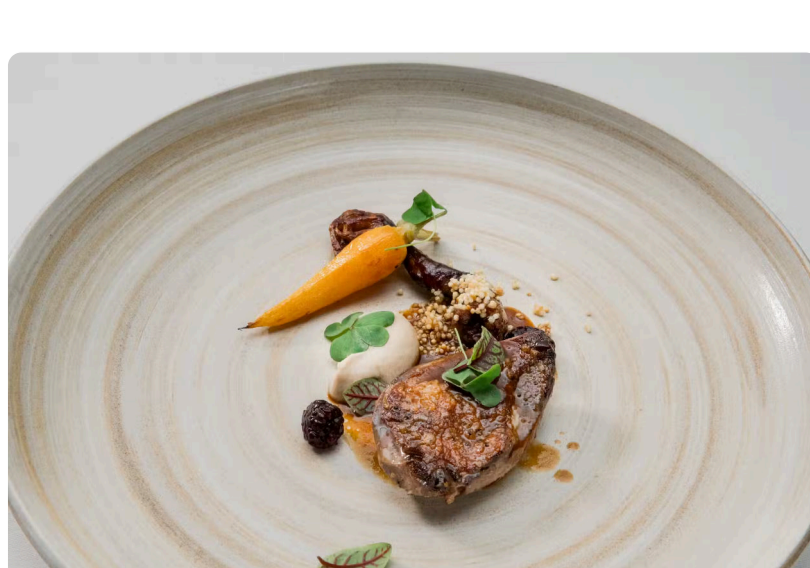
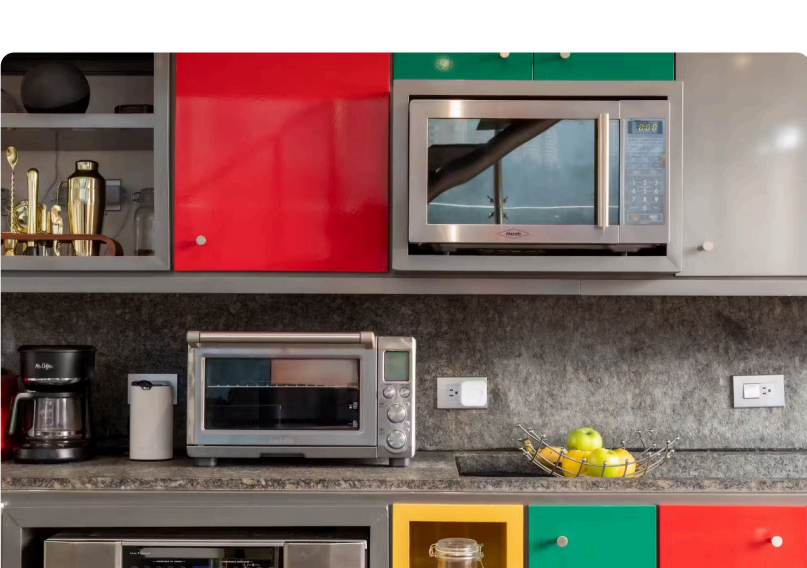
### Electricity



### Artificial Intelligence



## Microwave or Michelin Star?





# The Emergence of Legal AI



## What can AI actually do in Legal?

We can zero in on how AI is used in the legal sector to come up with Legal AI.

AI is usually used to perform a specific task. This describes what **action** can be performed.

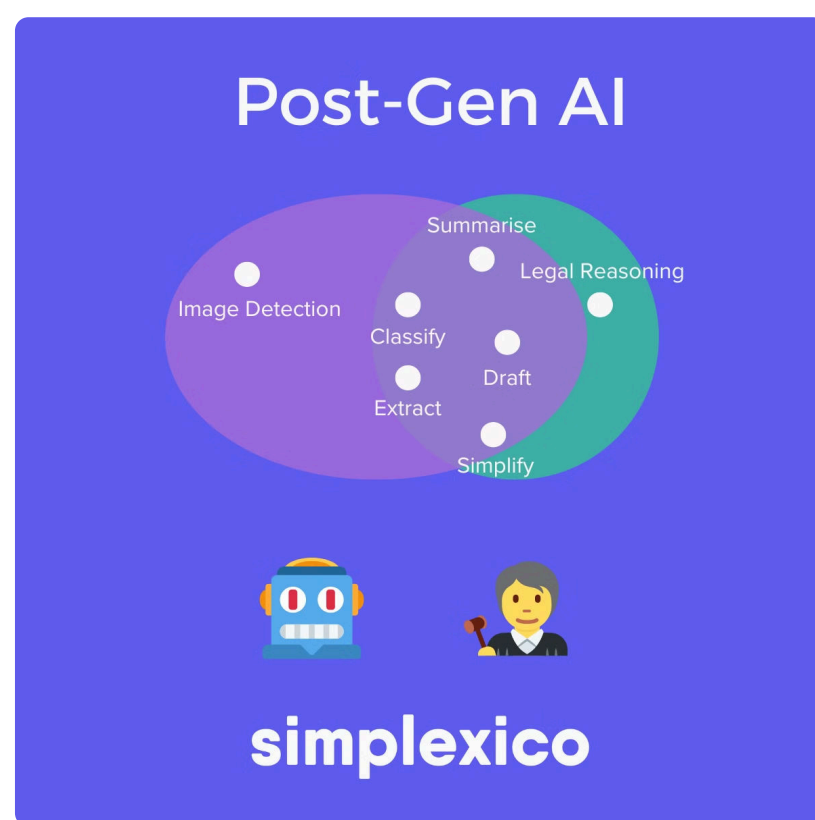
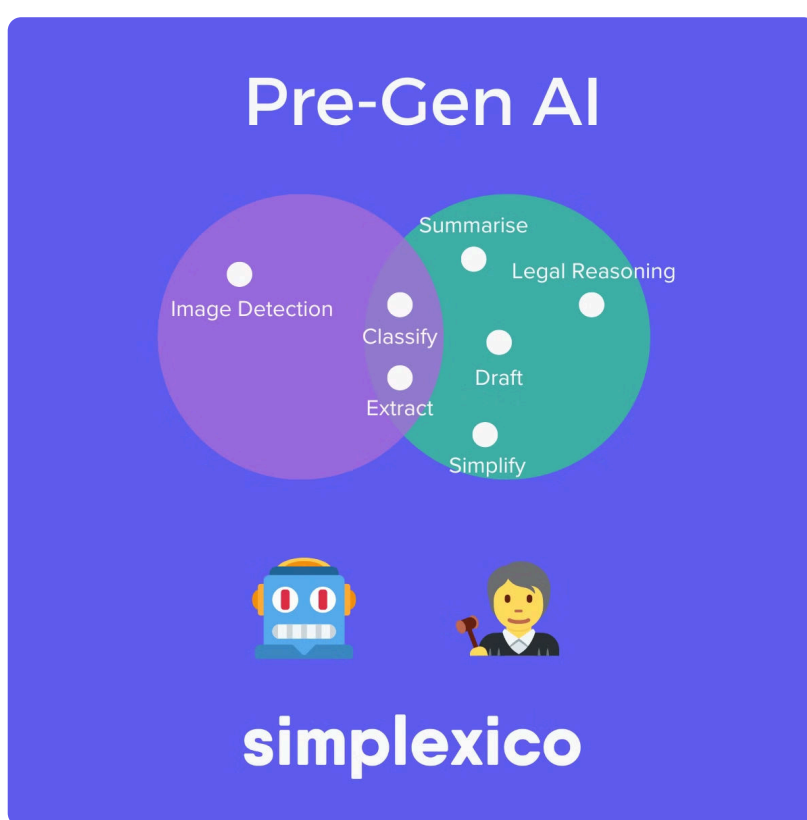
Let's take a look at some actions we can do in Legal with AI.

LEGAL AI ACTIONS	
Through AI we want to mimic actions that humans can perform. The Legal AI actions capture those actions lawyers tend to be involved where AI could now be used.	
<b>EXTRACT</b> Extracting key pieces of information from a passage of text to go from unstructured data to structured data.	<b>LABEL</b> Tagging a text on a phrase, sentence or paragraph level with a label. This is also known as classification.
<b>COMPARE</b> Comparing two passages of text on a phrase, sentence, paragraph or document level to identify similarities and differences in wording and meaning.	<b>ORGANISE</b> Organising a collection of texts so that structure is created by grouping together similar texts. This is also known as clustering.
<b>FIND</b> Finding relevant information from a collection of texts. This is also known as search or retrieval.	<b>DRAFT</b> Generating text through drafting.
<b>SUMMARISE</b> Creating a short-form summary from a long-form text.	<b>&amp; MORE?</b> Can you think of any other actions? Get in touch and let us know!

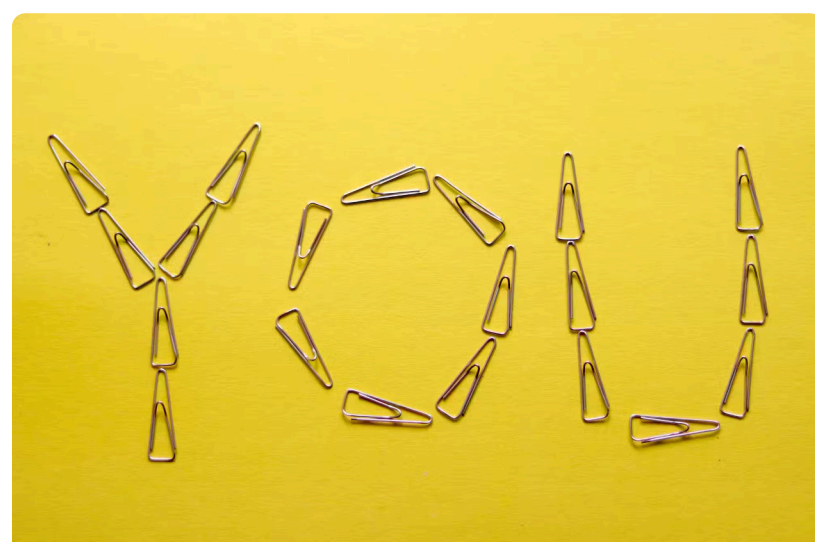
## !/? What's changed with AI in Legal?

Before

After



## The Future of Legal AI?



# ? Questions

Thank you for your attention!!!!

📍 I'm also active on **LinkedIn** and post regularly about AI in the legal industry.

✅ If you have any questions, feedback or would like to continue the conversation you can reach me at **[uwais.iqbal@simplexico.ai](mailto:uwais.iqbal@simplexico.ai)**

