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Cooking with AI

A kitchen analogy to break down the AI jargon

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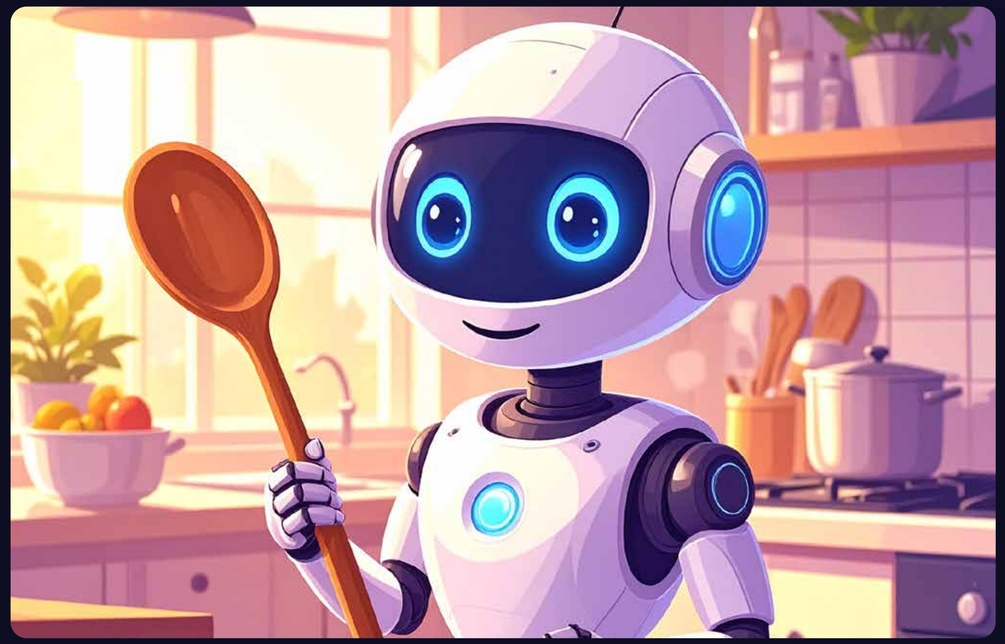
Imagine...

- You're running a high-end kitchen.
- Your goal: To serve incredible dishes (products) to your customers (users).
- You've brought **Crispin**, a robot sous-chef, trained in every cuisine and cooking technique you can think of.
- You've also got helpers like **Quinn**, who tracks ingredients and keeps the kitchen running smoothly.



Let's step into the kitchen and break down some AI terms in a way my nan would understand

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AI = The whole smart kitchen team

Artificial Intelligence (AI) is like your entire team of robot kitchen assistants.

Some:

- Cook dishes (like **Crispin**)
- Recommend recipes
- Track what's in the pantry
- Do the cleaning up, etc.

Each one mimics some aspect of human intelligence, helping your restaurant run better

What is AI:

A broad field of technology that simulates human-like thinking and decision-making.

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Non-Generative AI
= Quinn, the quiet specialist

Not all AI is creative. Take **Quinn**, he doesn't write recipes or chat, but performs critical activities:

- Flags missing ingredients
- Suggests meals based on what's in the fridge
- Does the cleaning up

He's not making anything new, just analysing, spotting patterns, and flagging issues behind the scenes.

Examples:
Netflix suggesting shows,
your spam filter sorting emails

What is Non-Generative AI:

AI that classifies, predicts, or optimises but doesn't generate new content.

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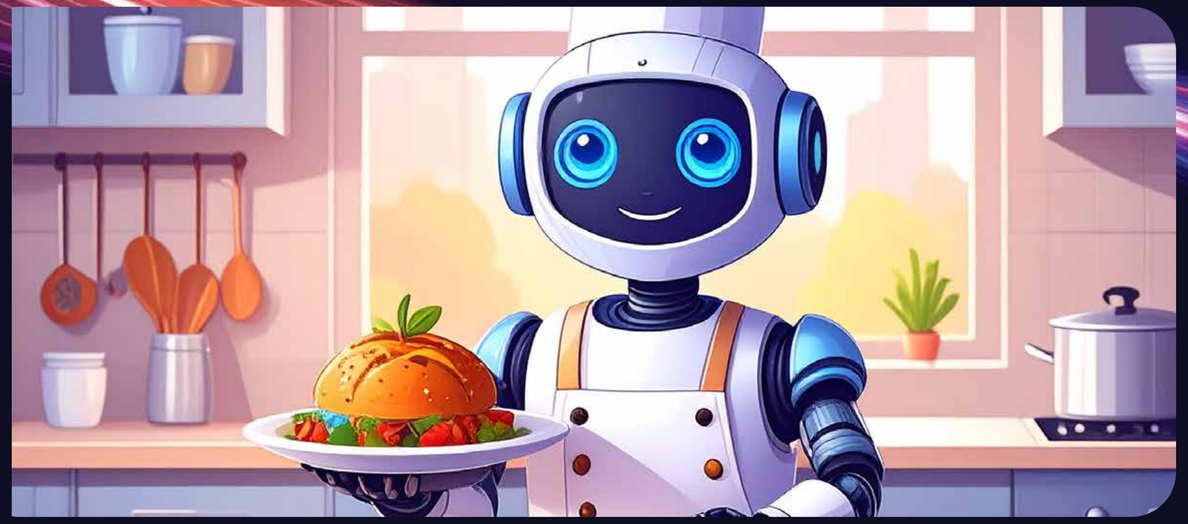
Generative AI = Freestyle cooking



Crispin's speciality is freestyle cooking.

You ask for a "fusion brunch combining Japanese and Mexican flavours," and **Crispin** invents a miso-chorizo pancake. It's new, delicious (mostly), and original-ish.

Examples:
ChatGPT writing a blog post
DALL·E generating a sketch
Copilot suggesting code

What is Generative AI:

AI that creates fresh content. Not copied, but constructed from patterns it has learned including text, images,audio, video, or code.

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LLM (Large Language Model) = Crispin herself

You ask…“Name a comforting vegan dish with mushrooms”

She might come back with…“miso-mushroom pasta”

Crispin has:

- Read tons of cookbooks, menus, and food blogs.
- Learned how people describe food, flavours, and traditions.
- Picked up how to write recipes, describe dishes, and answer food-related questions.

She’s great with words, but she can’t taste anything.

Example:
ChatGPT writing a holiday itinerary from a prompt.

What is LLM:

A type of generative AI that’s trained on loads of text, built to respond with language.

Model = Crispin’s brain

Inside **Crispin** is a model, her "brain."

This model takes your request (prompt), makes sense of it, and gives you something useful (hopefully) based on what she’s learned.

She doesn’t guess at random. She follows patterns, like pairing tomato with basil.

Example:
GPT-4 is the model that powersChatGPT.

What is a model:

A trained system that takes input and produces output. The core of how AI works.

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Training Data = the cookbooks she read

Inside **Crispin** is a model, her "brain."

Crispin knows what she knows because she’s been trained on: Recipes, Menus, Food blogs, Cooking shows, etc...

But if her training only included European cuisine, she might not know what to do with gochujang or cassava!

Bias in = bias out

- Example:
  A chatbot trained on years of customer support transcripts.

What is training data:

The stuff the AI learns from. It shapes how it responds.

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Machine Learning = how she learned recipes

Crispin didn't get handwritten - or typed - rules.

She learned by watching thousands of chefs and picking up patterns e.g.

- *"Ah, onions usually sauté for 5 minutes.*
- *"Pasta often comes with something tangy."*

Example:
Spotify learning what music you like.

What is machine learning:

Learning from data instead of being explicitly programmed.

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Hallucination = Crispin makes stuff up that sounds true

Sometimes **Crispin** confidently serves you a “traditional Swedish sushi taco with chocolate sauce.”

Sounds like it could be real, but it’s totally made up.

Example:
You ask AI: “What’s the capital of Australia?” and it replies: “Sydney” (which sounds right but, it’s actually Canberra).

What is hallucination:

AI generating outputs that sound right but are totally false.

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Prompt = your recipe request

To get **Crispin** cooking, you give her a prompt, a clear dinner order, e.g. "Make a 3-course vegan menu for a dinner party" or "Explain the difference between tofu and paneer."

The clearer your prompt, the better her response.

Vague requests? You'll get something odd back.

Example:
Typing "Summarise this article in 3 bullet points" into ChatGPT.

What is a prompt:

The input you give to a model to get a desired output.

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Agentic AI = Crispin runs the kitchen with minimal instructions

“One day, you say: “Plan dinner, shop”

Crispin takes over. She plans, orders groceries, cooks and even lights the candles - all without more input from you but you’re still in charge.

Agentic AI shifts the workload, not the responsibility.

Example:
AI that plans your trip, books the hotel, and sorts your travel from start to finish.

What is agentic AI:

AI that doesn’t wait for each prompt. It figures out the steps and completes the broader job given to it.

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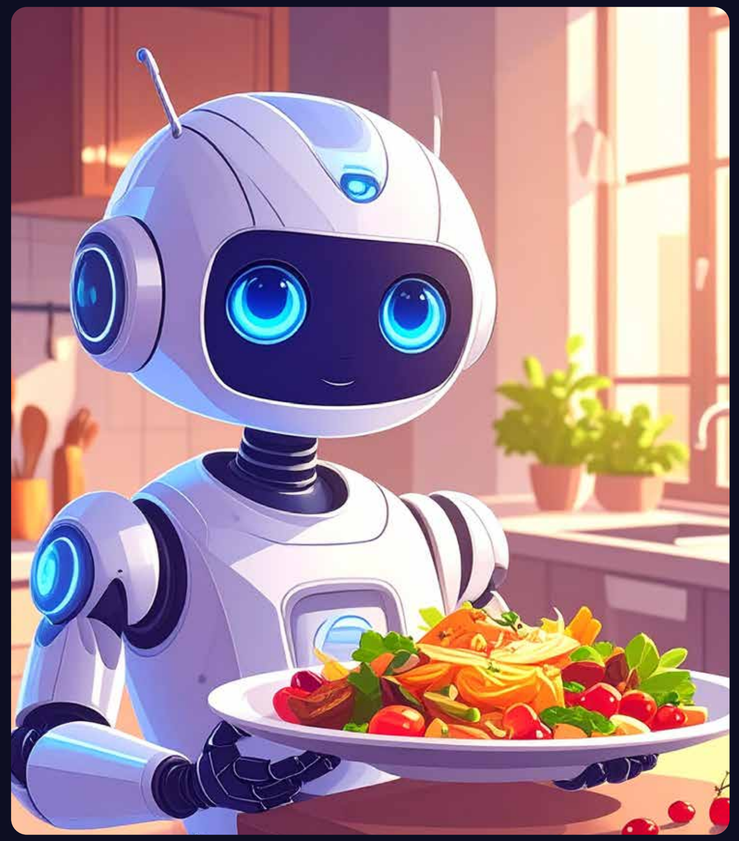
In summary...



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Non-Generative AI: AI that classifies, predicts, or optimises but doesn't generate new content.

Generative AI: AI that creates fresh content. Not copied, but constructed from patterns it has learned including text, images, audio, video, or code.

LLM (Large Languague Model): A type of generative AI that's trained on loads of text, built to respond with language.

Model: A trained system that takes input and produces output. The core of how AI works.

Training data: The stuff the AI learns from. It shapes how it responds.

Machine learning: learning from data instead of being explicitly programmed.

Hallucination: AI generating outputs that sound right but are totally false.

Prompt: The input you give to a model to get a desired output.

Agentic AI: AI that doesn't just follow one instruction or respond once, it figures out the steps, makes decisions, and gets a broader job done on its own.

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The Takeaway

Working with AI is like managing a brilliant but unpredictable sous-chef.

Crispin is quick, clever and creative but she needs:

- Clear instructions **(prompts)**
- Good training **(data)**
- Guardrails and oversight **(human touch)**

As UXers, our job is to create the right environment, not just so **Crispin** performs well, but so people feel supported, safe and in control when working with her.

With thoughtful design, we don't just use AI, we co-create human-centred, trustworthy AI experiences.

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Data and AI in five minutes

Short, focused videos explaining the core concepts in data and AI engineering.

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