



# Opleiding AI



Jan Meskens

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# Agenda



## DAG 1

AI Introductie

Machine Learning

Geavanceerde AI

Use Cases

## DAG 2

Data

Digitale AI Assistant

AI oplossingen in de  
praktijk

Privacy & Ethiek

# Agenda



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AI Introductie

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praktijk

Privacy & Ethiek



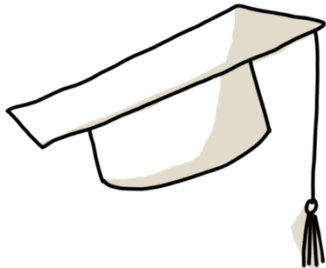
# DAG 1



# Jan Meskens



Data and AI Strategy  
Consultant



Lecturer of several AI and  
Data Strategy Trainings



Founder and Manager  
of Sievax



# Jan Meskens



[linkedin.com/in/janmeskens](https://www.linkedin.com/in/janmeskens)



[medium.com/@meskensjan](https://medium.com/@meskensjan)



[www.sievax.be](http://www.sievax.be)



[jan@sievax.be](mailto:jan@sievax.be)





# Wie is wie?

- Wat is je rol?
- Ervaring met AI?
- Mogelijke toepassingsgebieden AI?

DEEL 1

# AI INTRODUCTIE



# AI Introductie

- Historiek
- Wat is AI?
- AI Capabilities
- Verschillende soorten AI



# AI Introductie

- Historiek
- Wat is AI?
- Verschillende soorten AI



# AI Introductie

- **Historiek**
- Wat is AI?
- AI Capabilities
- Verschillende soorten AI



# Artificiële **Intelligentie**

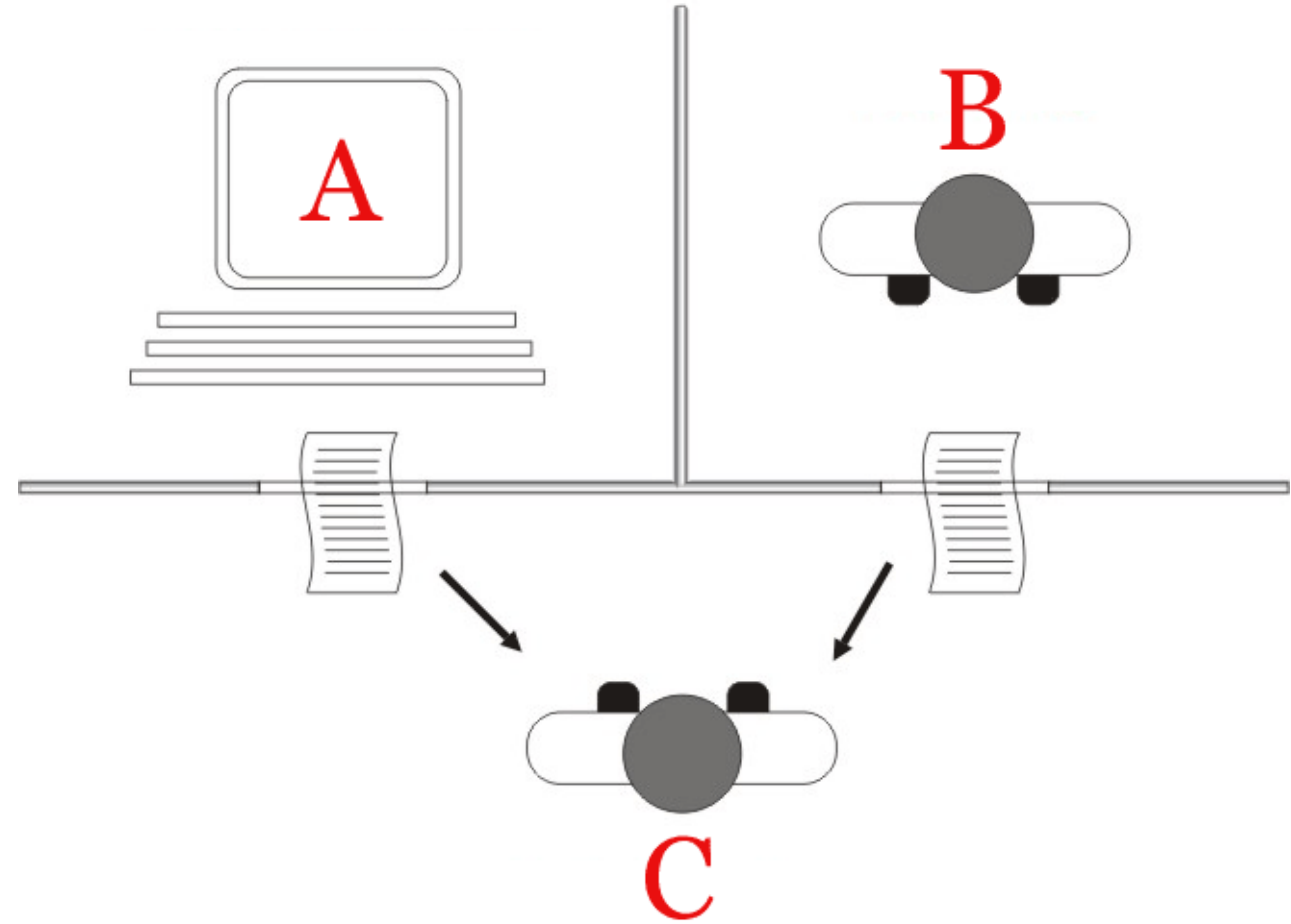
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Wat is intelligentie?

# 1949 – Turing Test



Alan Turing



# 1956 – Dartmouth Summer Research Project on Artificial Intelligence



A Proposal for the  
**DARTMOUTH SUMMER RESEARCH PROJECT ON ARTIFICIAL INTELLIGENCE**

*June 17 - Aug. 16*

We propose that a 2 month, 10 man study of artificial intelligence be carried out during the summer of 1956 at Dartmouth College in Hanover, New Hampshire. The study is to proceed on the basis of the conjecture that every aspect of learning or any other feature of intelligence can in principle be so precisely described that a machine can be made to simulate it. An attempt will be made to find how to make machines use language, form abstractions and concepts, solve kinds of problems now reserved for humans, and improve themselves. We think that a significant advance can be made in one or more of these problems if a carefully selected group of scientists work on it together for a summer.

The following are some aspects of the artificial intelligence problem:

1) Automatic Computers

If a machine can do a job, then an automatic calculator can be programmed to simulate the machine. The speeds and memory capacities of present computers may be insufficient to simulate many of the higher functions of the human brain, but the major obstacle is not lack of machine capacity, but our inability to write programs taking full advantage of what we have.

2) How Can a Computer be Programmed to Use a Language

It may be speculated that a large part of human thought consists of manipulating words according to rules of reasoning

## 1964 – Eliza

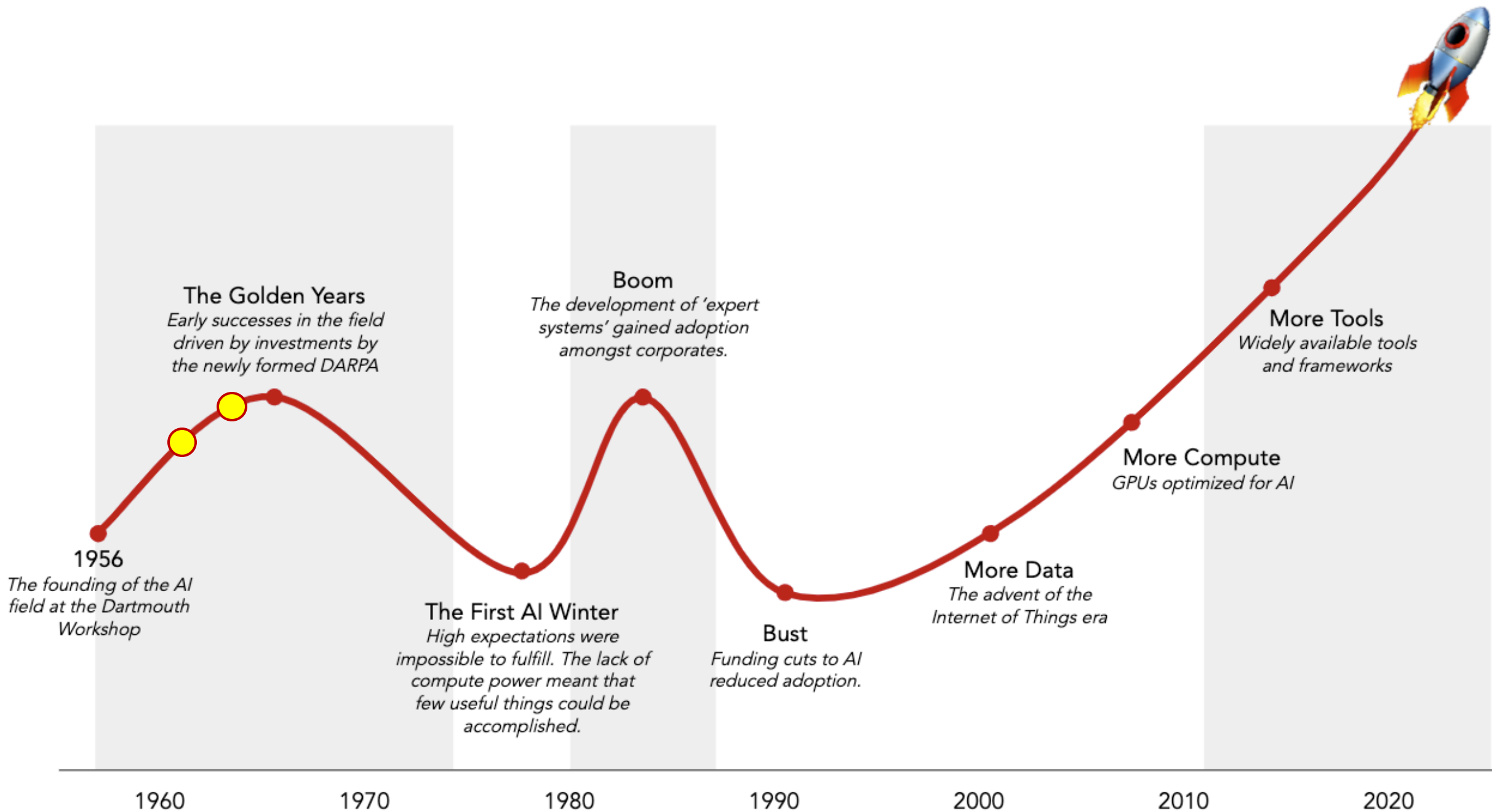


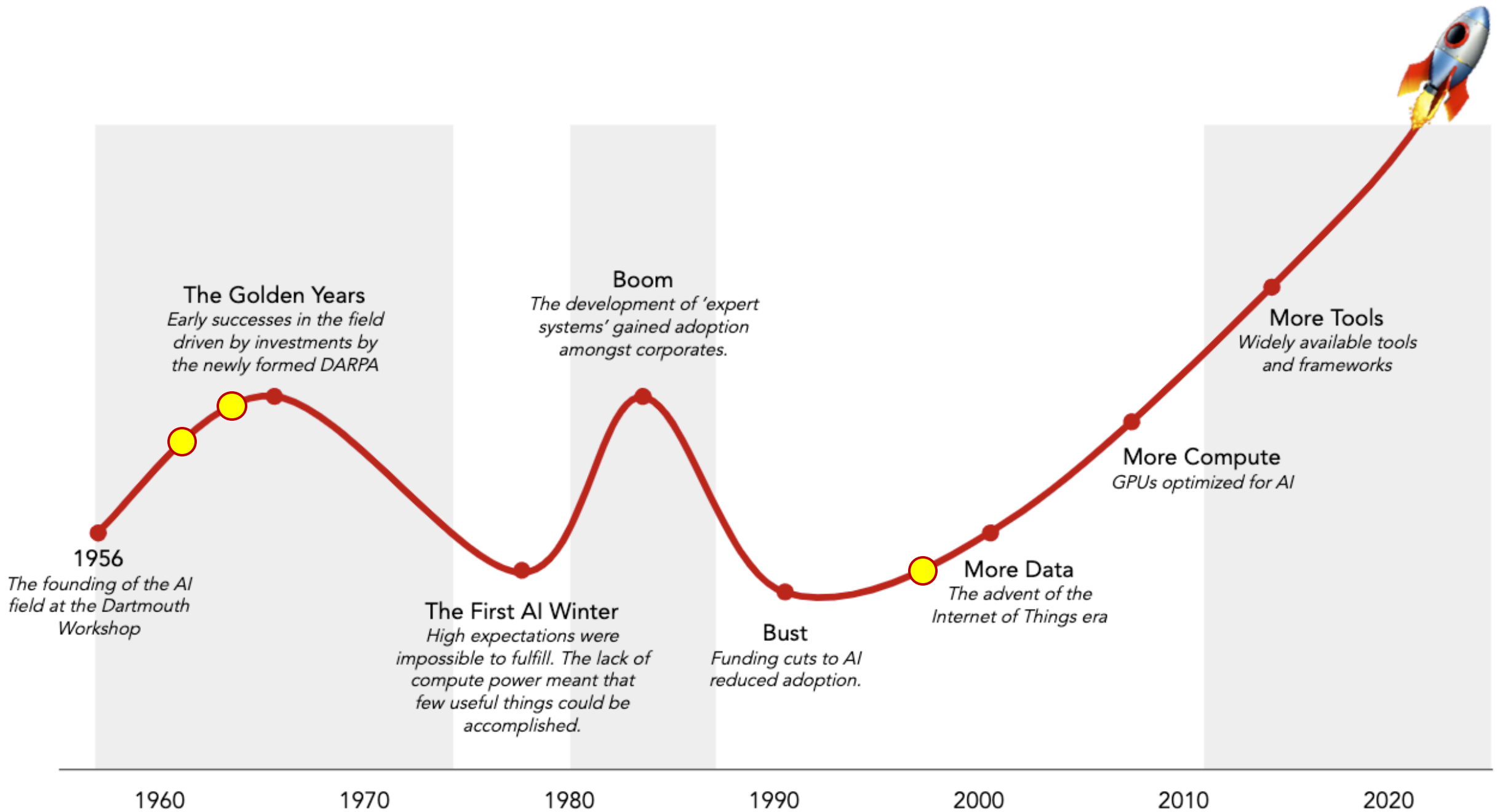
...from your company. I was  
with your prompt delivery. I  
opened the package, I found  
either in the box or with the  
it is essential that our acco-  
department have the invoice by  
the first quarter. It would be  
accountants and I if you may  
other invoice as soon as pos-

# 1967 – Unimate

The letters 'AP' in a bold, white, sans-serif font, positioned in the upper right corner of a large black rectangular area. A thin red horizontal line is located directly beneath the 'AP' text.

**AP**

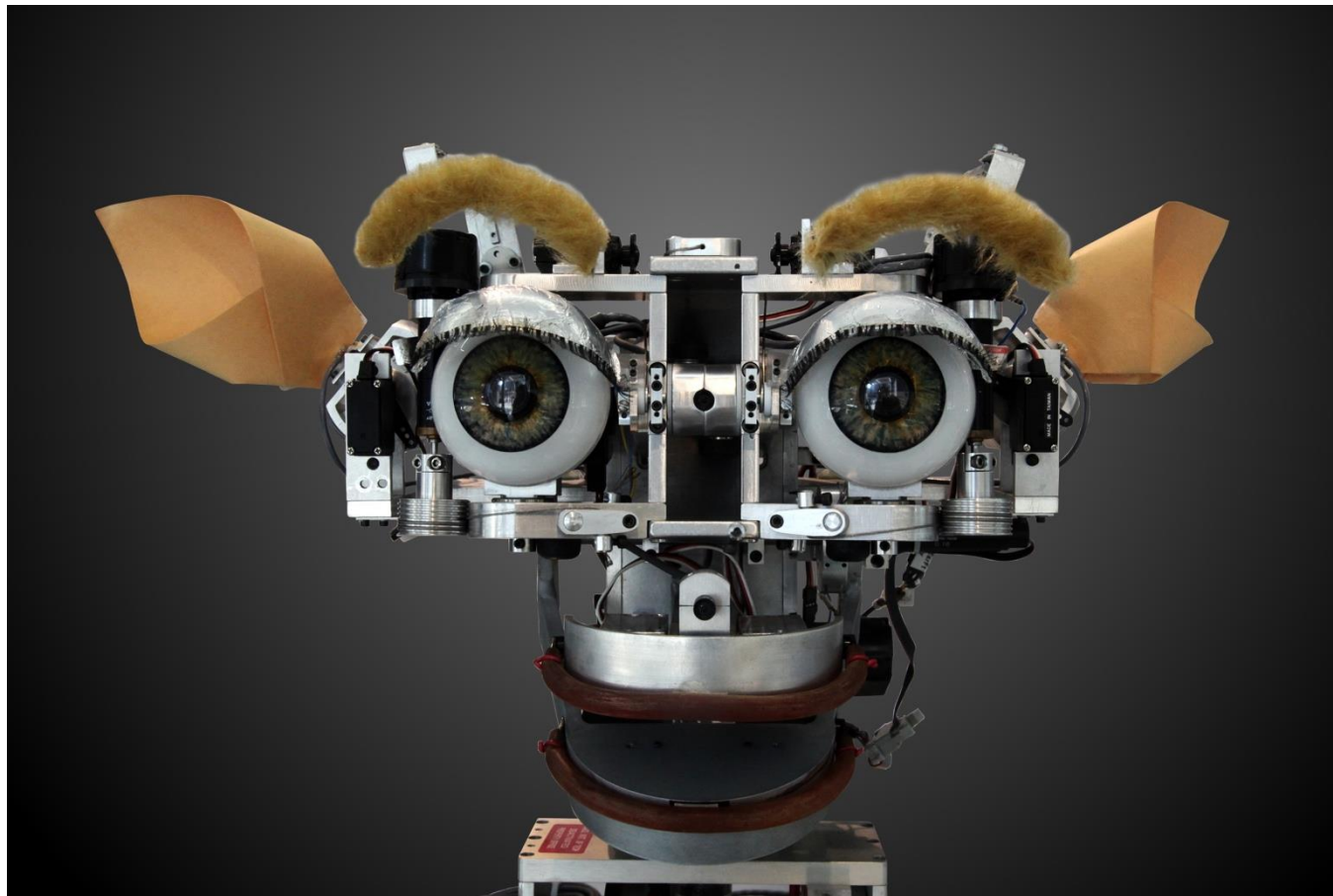
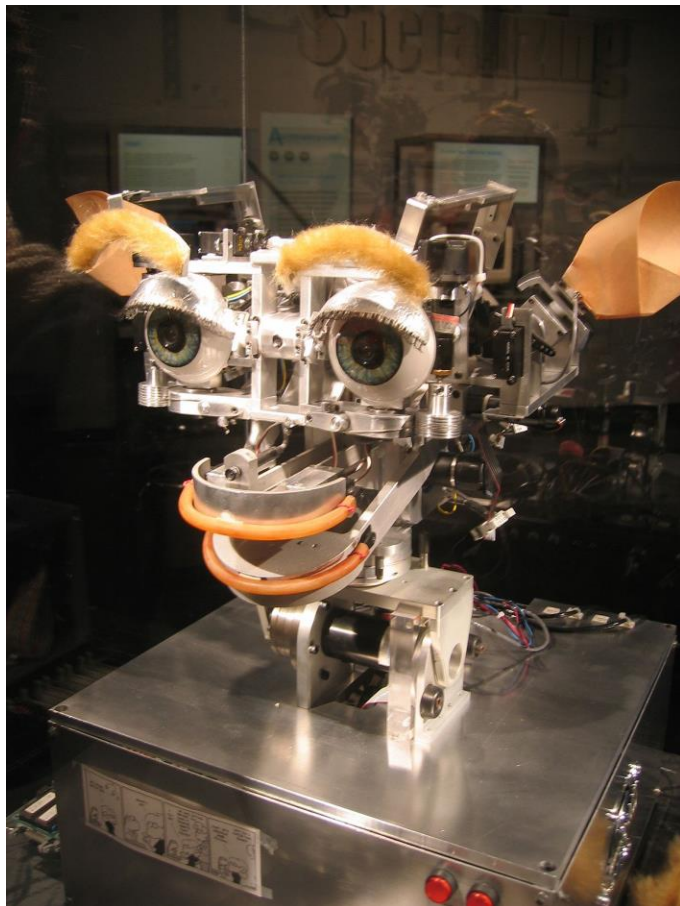




# 1997 – Deep Blue



# 1997 – Kismet (MIT)



# 2002 – Roomba



# 2011 – IBM Watson Wins Jeopardy!



# Digital Assistants

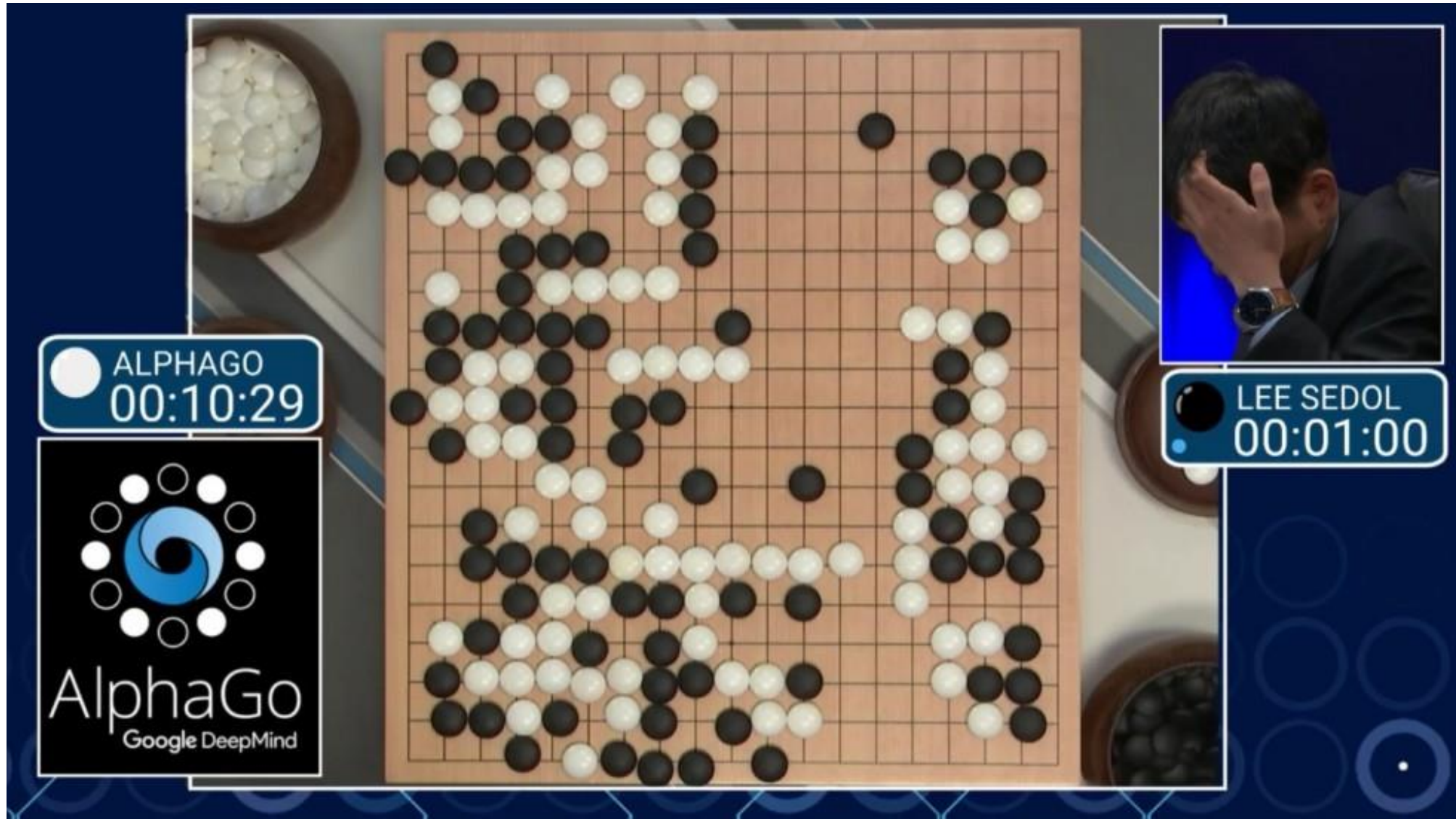


**Siri (2011)**



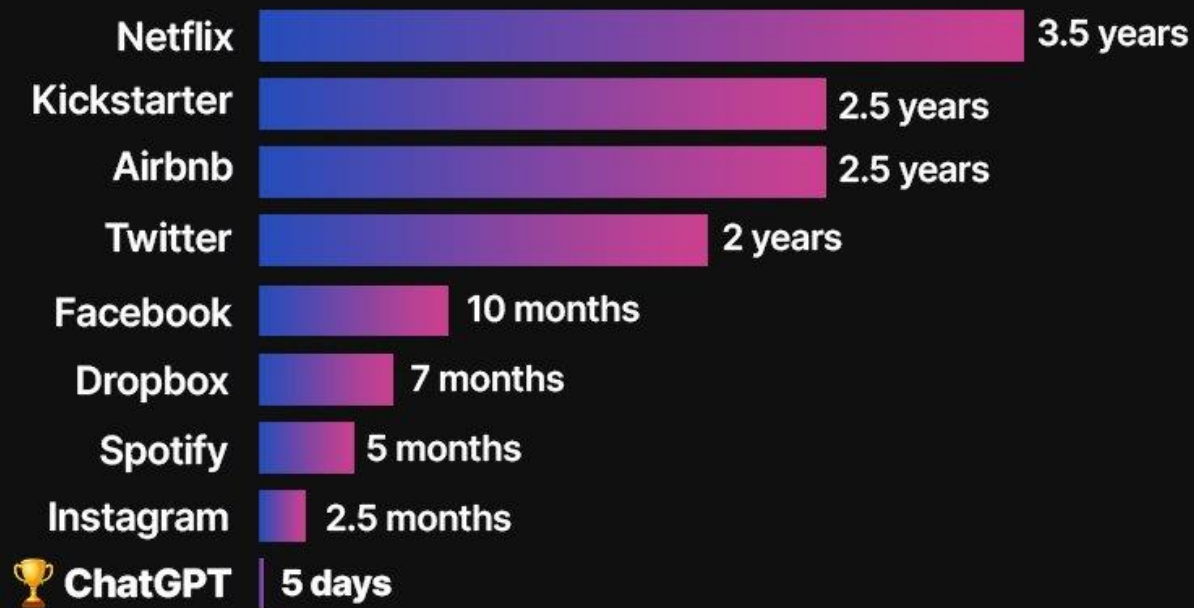
**2014**

# 2016 – Google AlphaGo



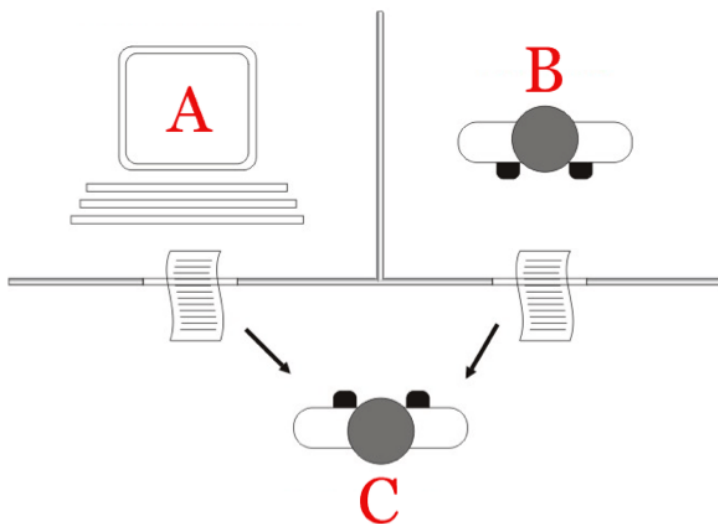


# Time it took to reach **One Million** Users:





## 1949 – Turing Test



# nature

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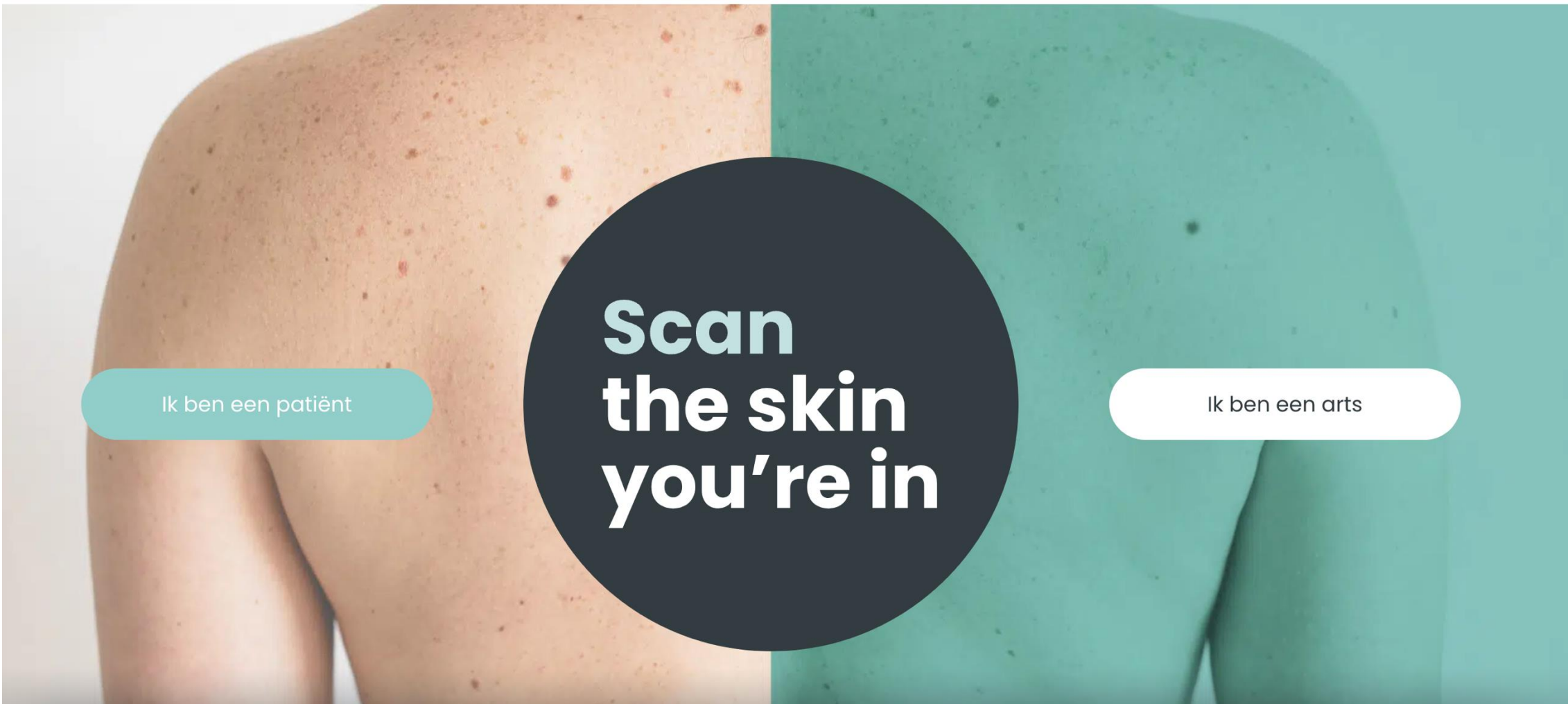
[nature](#) > [news feature](#) > [article](#)

NEWS FEATURE | 25 July 2023

## ChatGPT broke the Turing test – the race is on for new ways to assess AI

Large language models mimic human chatter, but scientists disagree on their ability to reason.

[Celeste Biever](#)

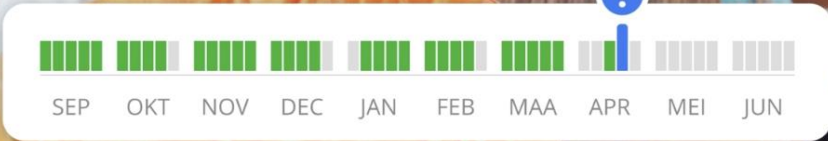


Ik ben een patiënt

Scan  
the skin  
you're in

Ik ben een arts

# Smartschool speurt via AI naar leerproblemen



**Slim signaal gedetecteerd op maandag 22 april 2024** **AANDACHT**

Signaal dempen Afspraak maken Bericht sturen

We merken een **daling** op van de resultaten voor **wiskunde en wetenschappen**. Ook is Gitte recent **frequent afwezig**.

**Gitte Peeters**

Geboortedatum: 15 mei 2008  
 Leeftijd: 16 jaar  
 Klas: 4C  
 Klastitularis: Annemie Janssens

Raadpleeg snel de relevante data

- Resultaten
- Afwezigheden
- Aanmeldingen



# Ook bij banken is AI in opmars: “Op één aspect heeft artificiële intelligentie het al voor het grootste deel overgenomen”



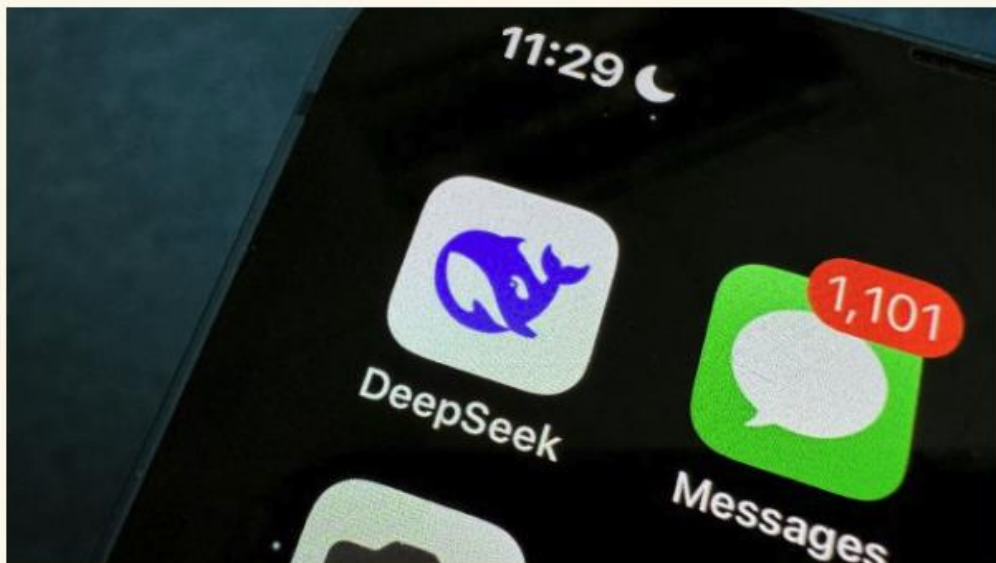
Onder meer grootbanken BNP Paribas Fortis en KBC maken gebruik van AI. — © Shutterstock

Tom Le Bacq

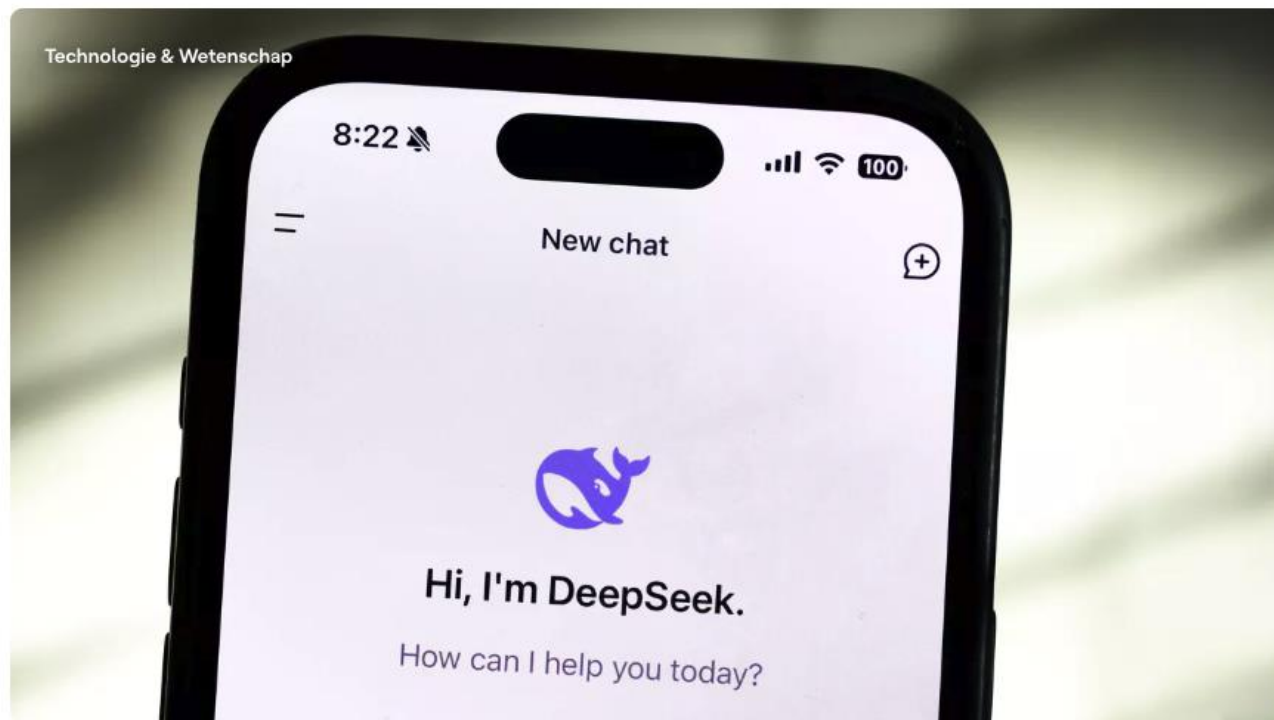
Gisteren om 03:00



# Chinese start-up DeepSeek zaait onrust in techwereld met AI-model van 5,6 miljoen



DeepSeek trok in de VS naar de top van de appwinkels. ©AFP



2025 Getty Images

## Nieuwe Chinese AI-chatbot DeepSeek zet techwereld in rep en roer

De nieuwe chatbot van de Chinese start-up DeepSeek gooit wereldwijd hoge ogen. De grote baas van ChatGPT ziet een "indrukwekkend AI-model" en VS-president Donald Trump heeft het over een "wake-up call" voor Amerikaanse techbedrijven. "DeepSeek lijkt vooral een stuk goedkoper, ook om te bouwen, dan de concurrentie", zegt Steven Latré, hoofd artificiële intelligentie van het Belgische technologiebedrijf Imec.



# AI Introductie

- Historiek
- **Wat is AI?**
- AI Capabilities
- Soorten AI

# OEFENING : Bepaal de regels!

INPUT



OUTPUT



Programma



*Welke regels  
programmeren we?*

# The “Traditional Programming Approach”



DATA



TRADITIONAL  
PROGRAMMING

→ ANSWERS

RULES



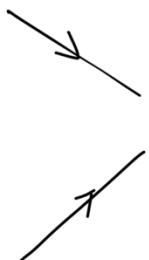


# The "AI Approach"



DATA

ANSWERS



ARTIFICIAL INTELLIGENCE

→ RULES



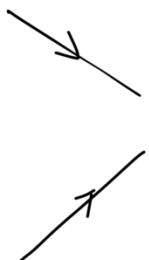


# The "AI Approach"



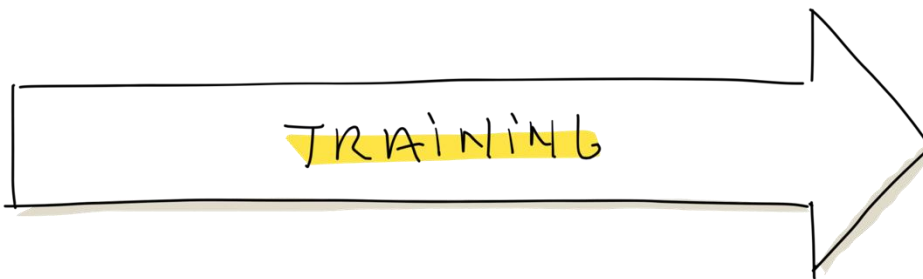
DATA

ANSWERS



ARTIFICIAL INTELLIGENCE

→ RULES



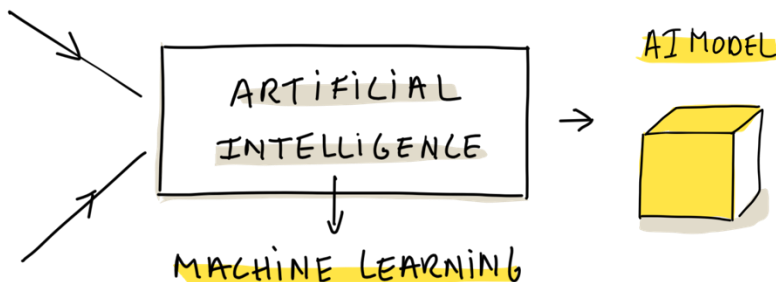
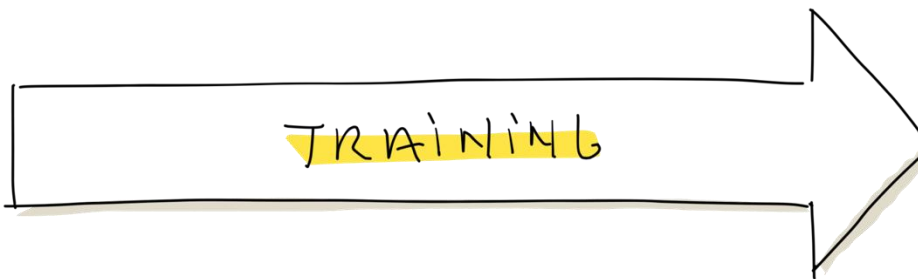


# The "AI Approach"

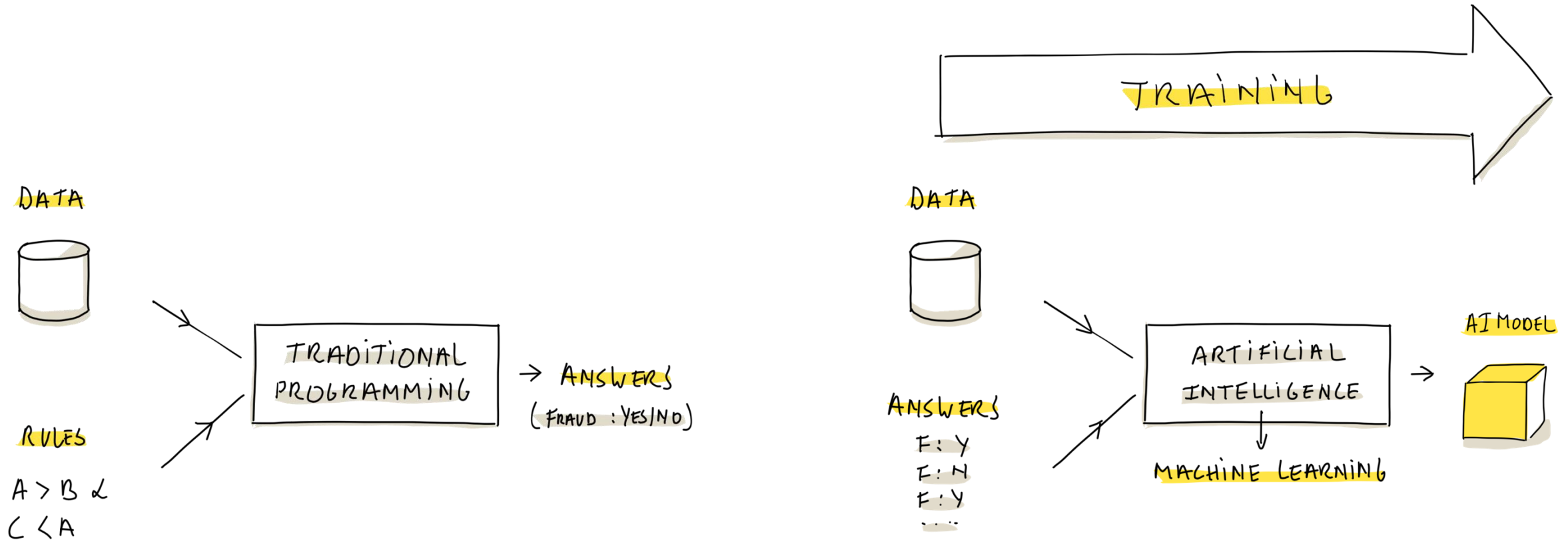


DATA

ANSWERS



# Voorbeeld: Fraude Detectie





# Training vs Serving

## TRAINING

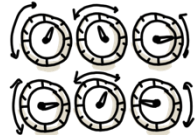
DATA



PREPROCESSING



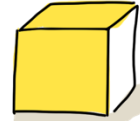
TRAINING



"STATISTICS"

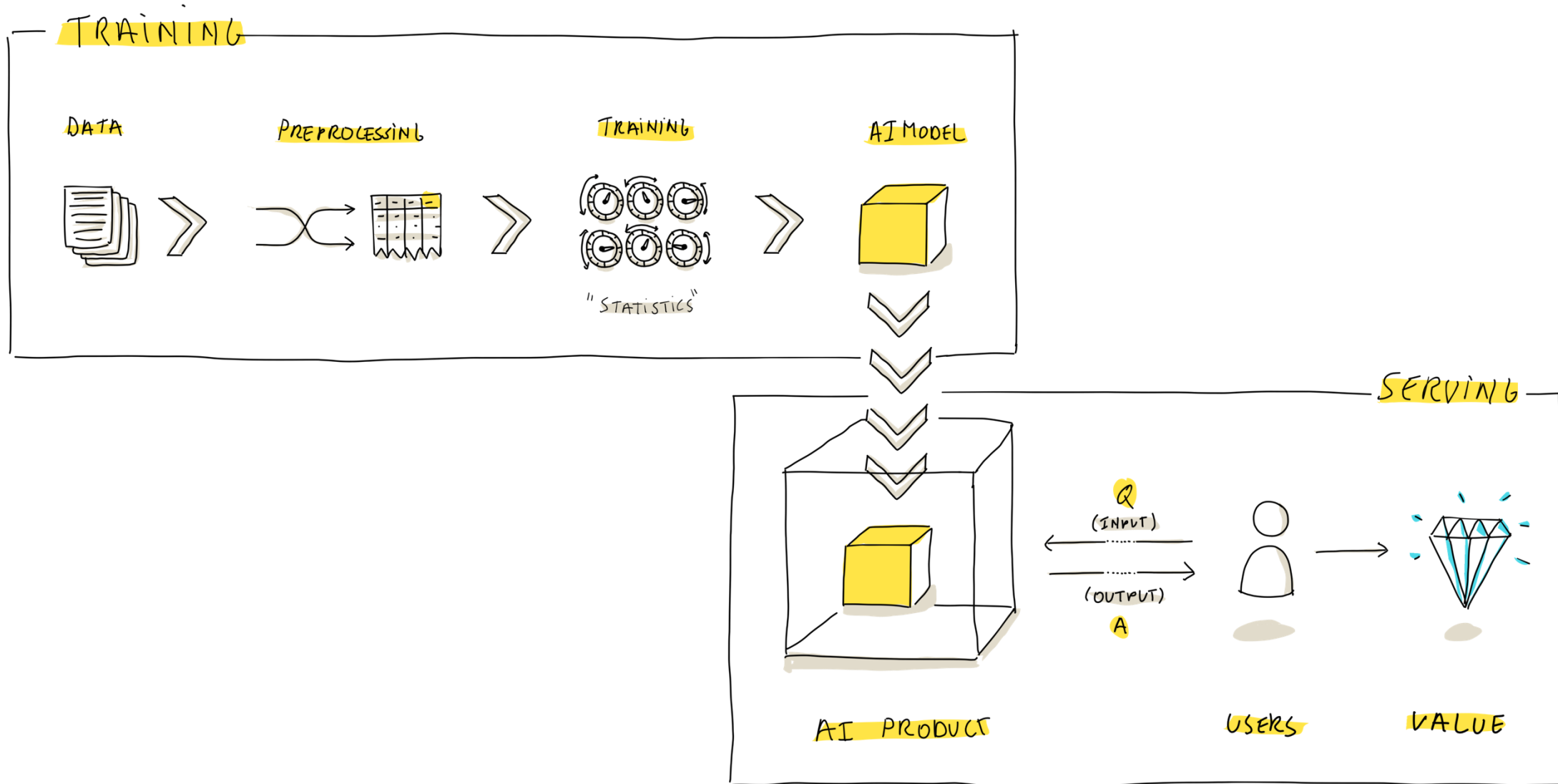


AI MODEL





# Training vs Serving

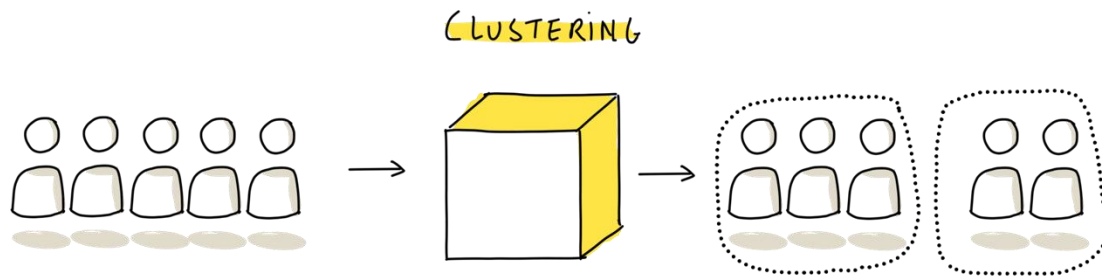
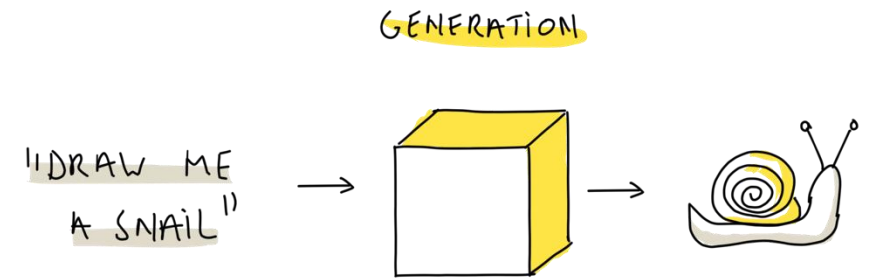
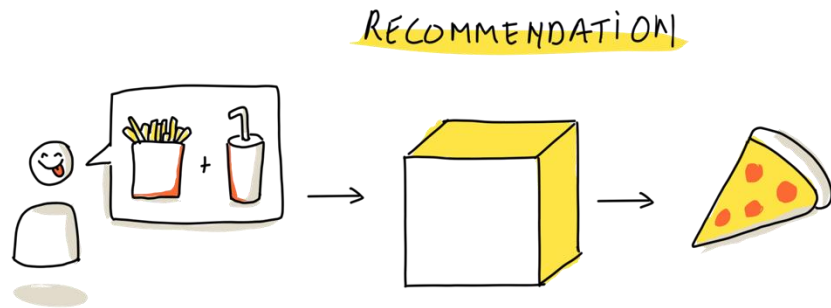
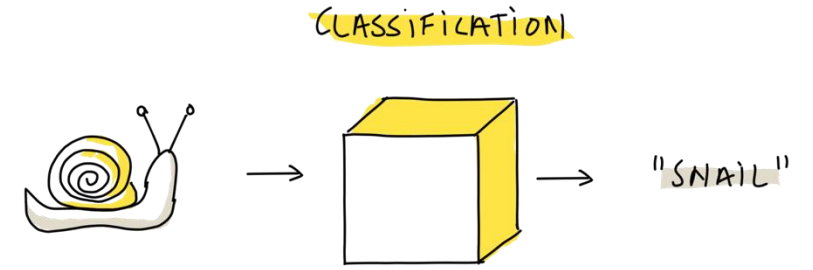
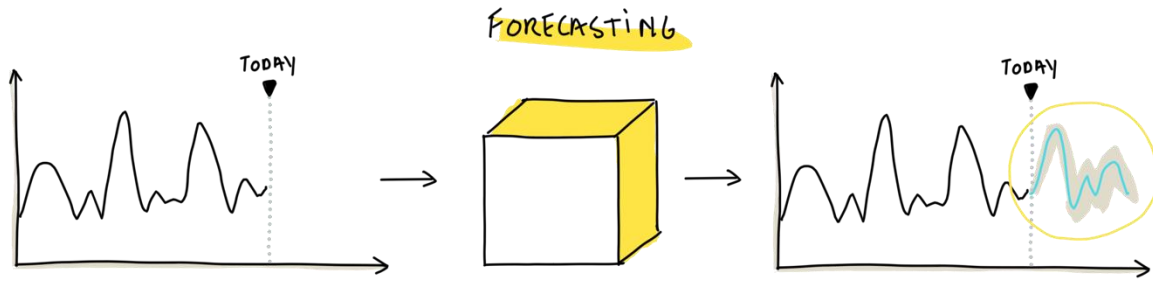




# AI Introductie

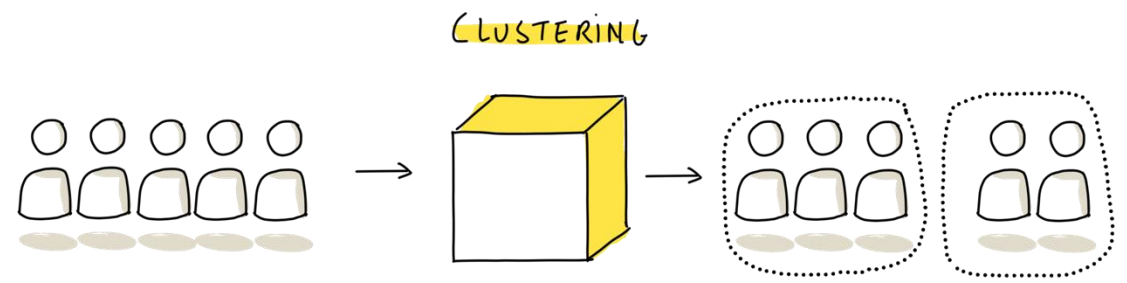
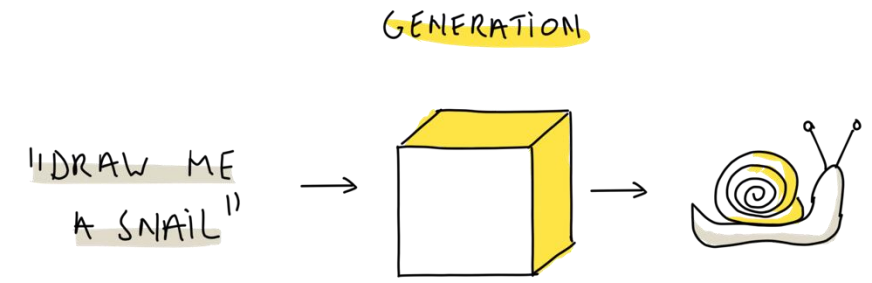
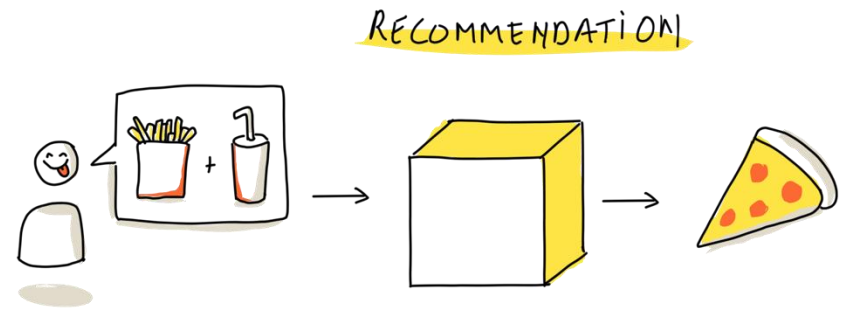
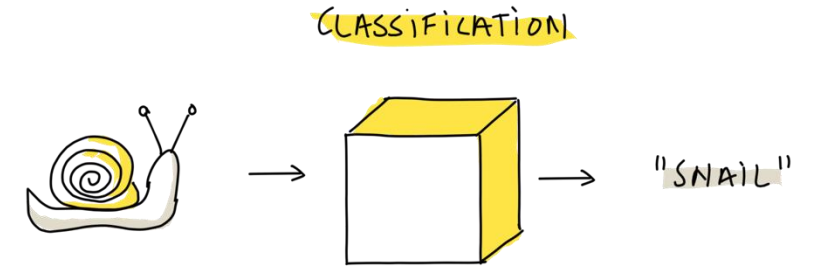
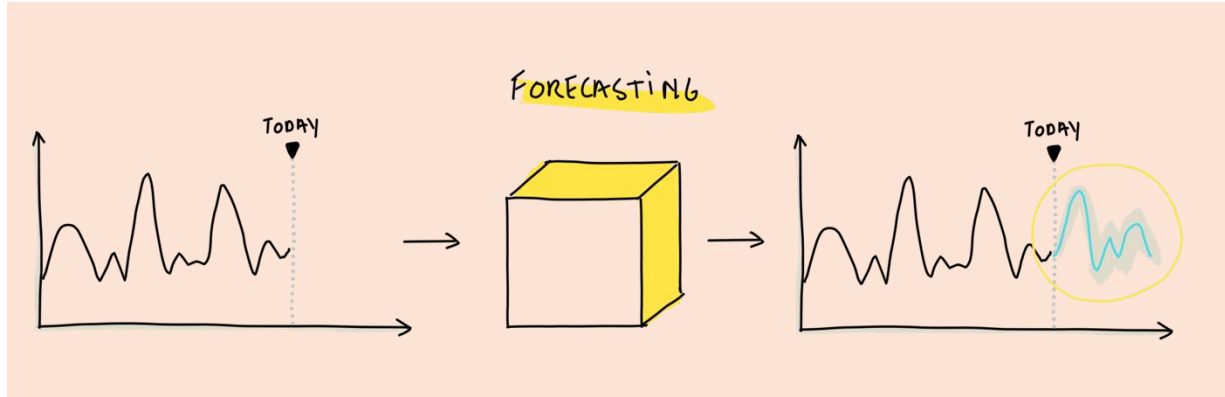
- Historiek
- Wat is AI?
- **AI Capabilities**
- Verschillende soorten AI

# AI Models have Varying Capabilities



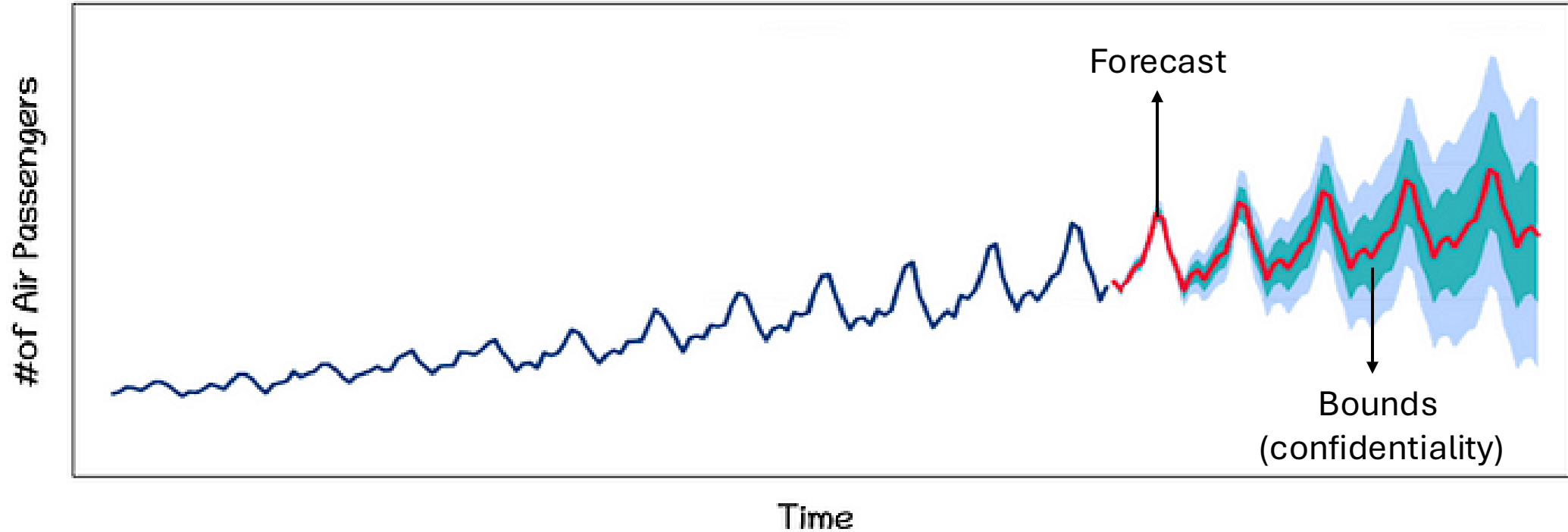
(**THERE EXIST MORE**)

# AI Models have Varying Capabilities



(**THERE EXIST MORE**)

# Forecasting: The Basics



# Example: Air Quality Forecasting



[Explore the data](#)

[Why air quality?](#)

[Why open data?](#)

[Partners](#)

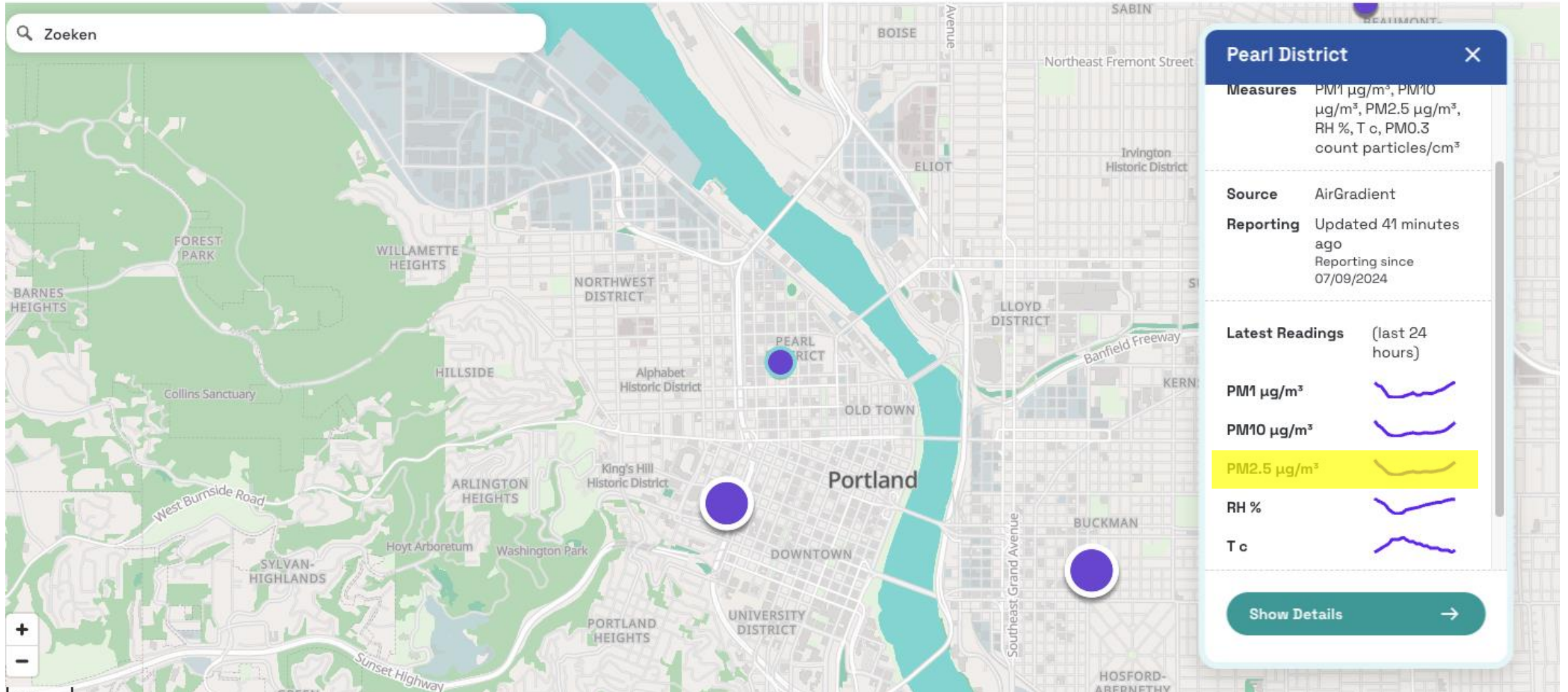
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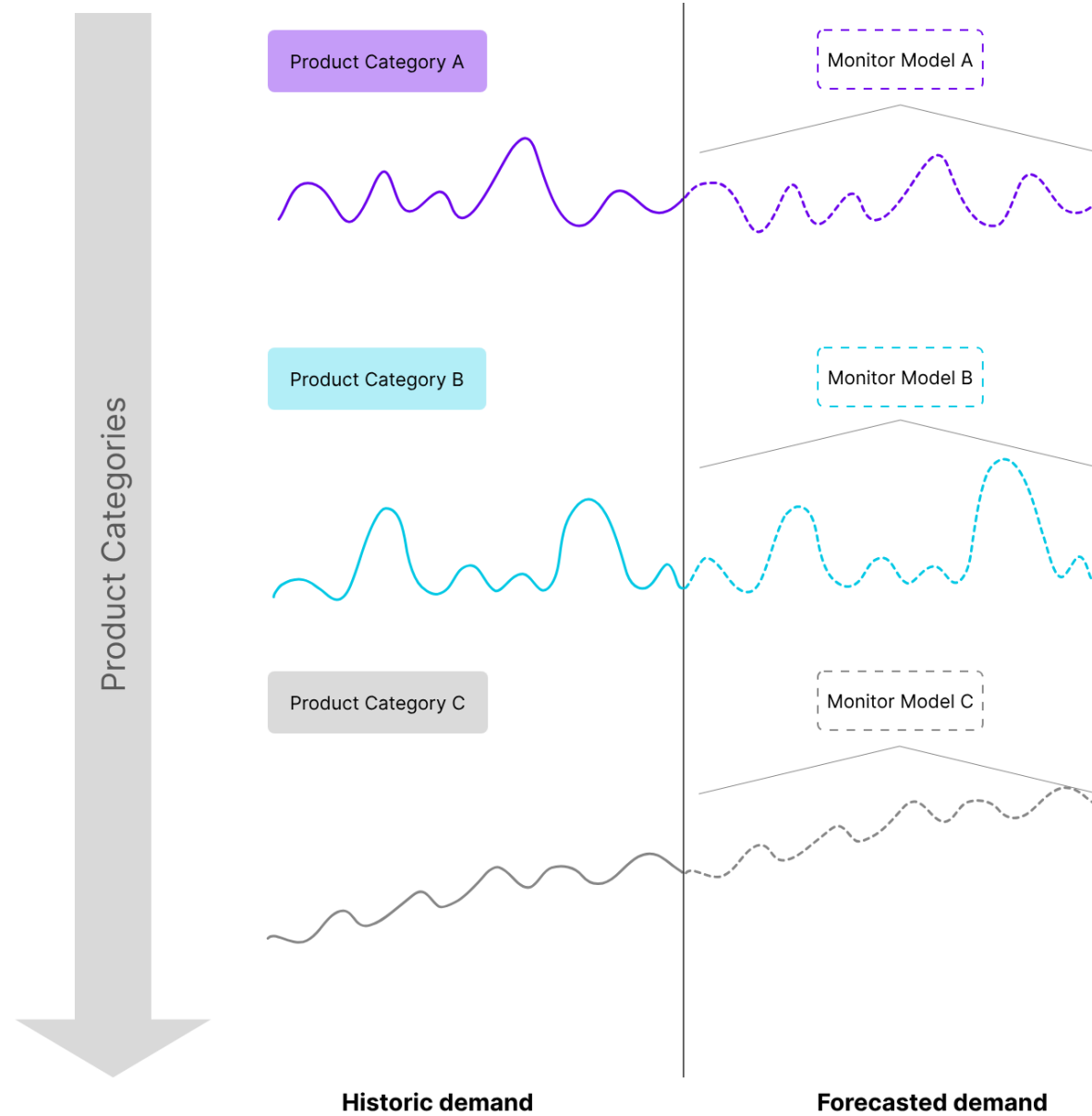
# Example: Air Quality Forecasting



*Forecasting the evolution of the PM2.5 on locations 1068 and 1067.*



# Example: Demand Forecasting



☰ ALL IMAGES ☰ Sign in

# Google

🔍
🗣️ 🏠

**Trending searches** ⋮

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- ↗️ brooklyn queens expressway closure

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- ↗️ 48 oysters date

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- ↗️ russia ukraine avdiivka

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- ↗️ netherlands vs france highlights

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- ↗️ mini nyt crossword clue

---

- ↗️ flexport layoffs

3:06 🔇 📶 🔋 84%

📍 Gifford, IL S

**Now**

## 67°

Cloudy  
Feels like 67°

High: 67° • Low: 50°



**Rain starting soon**  
Light to heavy rain from 2:28 PM continuing beyond 7:30 PM



Heavy  
Medium  
Light

Now      2:30 PM      3:00 PM

**Hourly forecast**

67°	65°	63°	64°	64°	60°
	100%	100%	80%	60%	60%
☁️	🌧️	🌧️	🌧️	🌧️	🌧️
Now	3 PM	4 PM	5 PM	6 PM	7 PM

**10-day forecast**





Voorspelt de GraphCast - die in deze indrukwekkende TPU v4-computer van Google huist - binnenkort ook ons Belgische weerbericht? © Google

## Voorspelt AI binnenkort ook ons weerbericht? Nu al zag GraphCast naderende orkaan drie dagen sneller

Bron: [hln.be](https://hln.be)

## Hoe goed is de AI-weerman? Eerste voorspellingen beloven zonnige toekomst



Het KMI voorspelt 24 uur per dag, zeven dagen per week het weer. ©Kristof Vadino

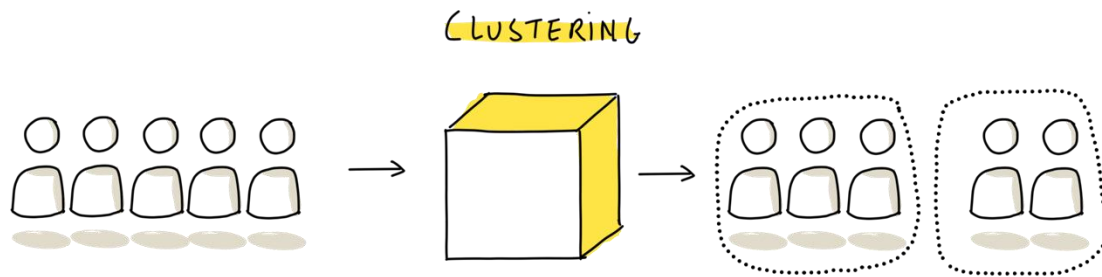
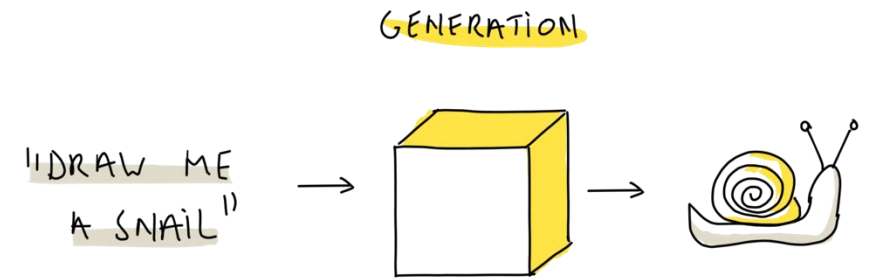
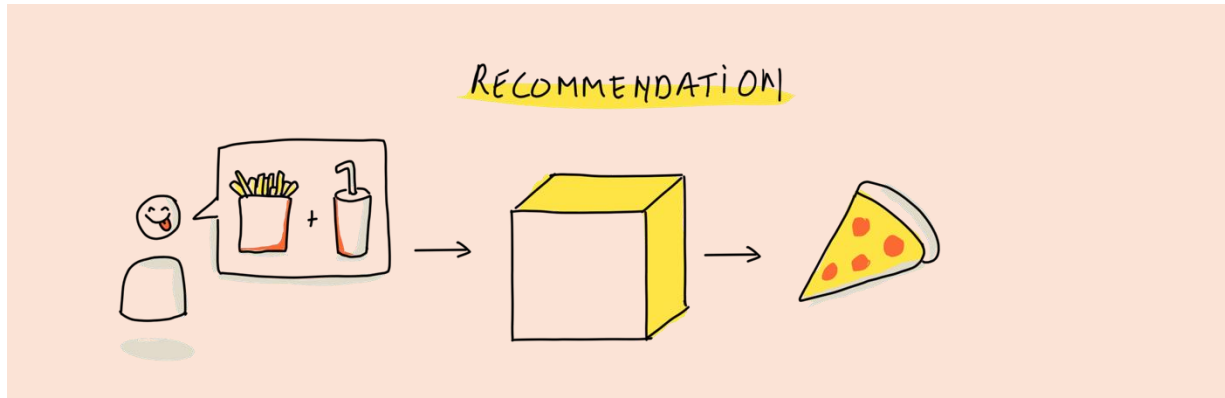
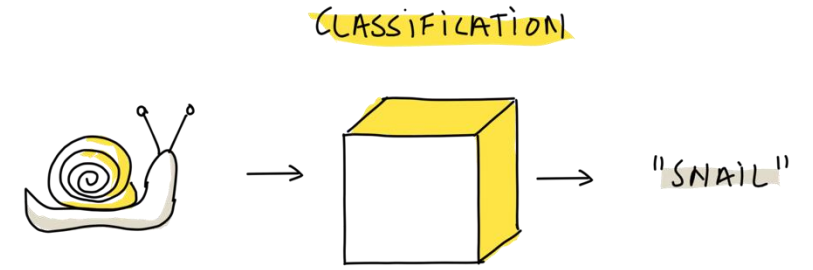
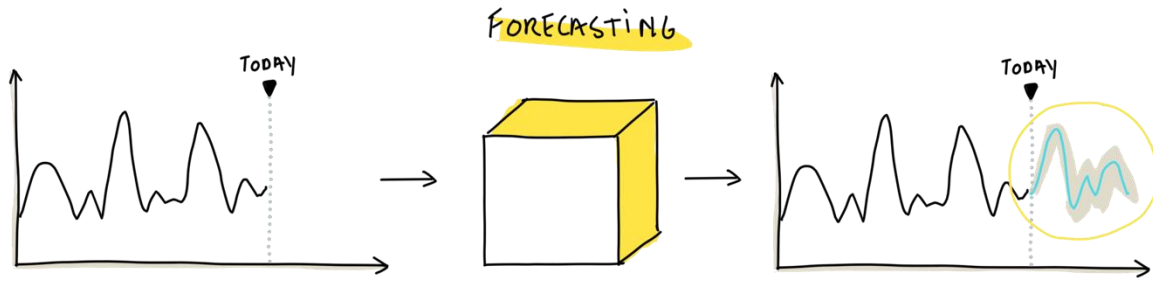
FLOOR EELBODE

22 augustus 2024 23:41

Het weer is notoir onvoorspelbaar en chaotisch. Staat ons met artificiële intelligentie een revolutie te wachten? 'Je steekt er data in, er gebeurt iets magisch en er komt een voorspelling uit.'

Bron: [tijd.be](https://tijd.be)

# AI Models have Varying Capabilities



(**THERE EXIST MORE**)



# Example: Frequently Bought Together



- This item:** PD35 Flashlight \$17.99
- 2-pack ARB Batteries \$5.99
- Fenix ARE-C2 Charger \$12.99
- Car Adapter 2x USB \$4.99

**ADD ALL TO CART**



PLAYLIST

# Discover Weekly

New Music For You To Discover!

Created by **Lori Pineda** • 25 songs, 1 hr 22 min

PLAY



FOLLOWERS  
21,056

Filter

	TITLE	ARTIST	ALBUM	
♡	Sick in the Head	Jackson Penn	Sick in the Head	2019-10-03
♡	Bad News	Pat Muresan	Bad News	11 days ago
♡	All My Life	Lionheir	All My Life	3 days ago
♡	Whisper Wait	Fosternicole	With You With ...	2019-10-03



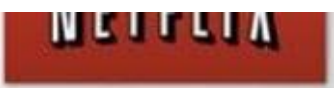
# House of Cards

★★★★★ 2013 TV-MA 1 Season HD 5.1

Sharks gliding ominously beneath the surface of the water? They're a lot less menacing than this Congressman.



*This winner of three Emmys, including Outstanding Directing for David Fincher, stars Kevin Spacey and Robin Wright.*



## Because you watched Orange Is the New Black



## Because you watched Red Lights





(C)ISTOCK.COM/JOHNFCOTT

19:09



Good evening,  
Stéphane 🌙

Inbox Stores

**85** ★  
Star balance

Rewards options ▾

25 50 150 200 400

[Details](#) [Redeem](#)

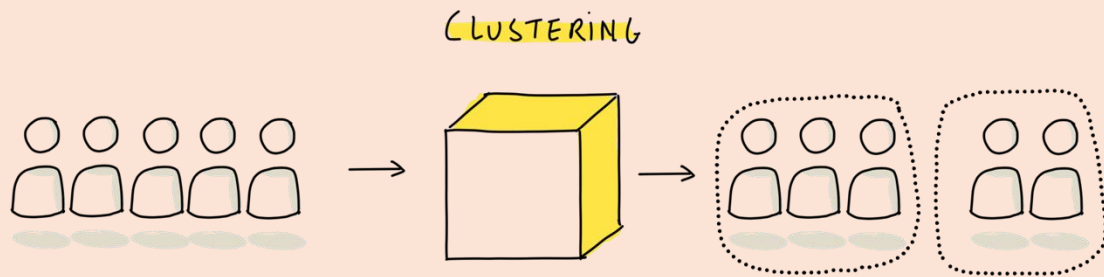
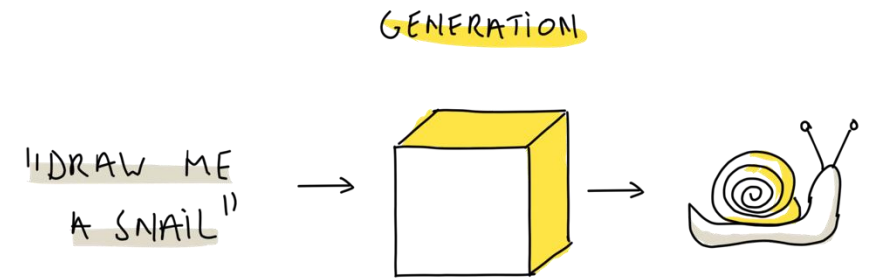
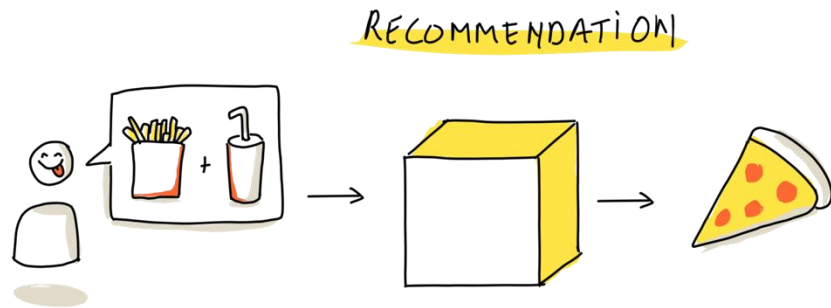
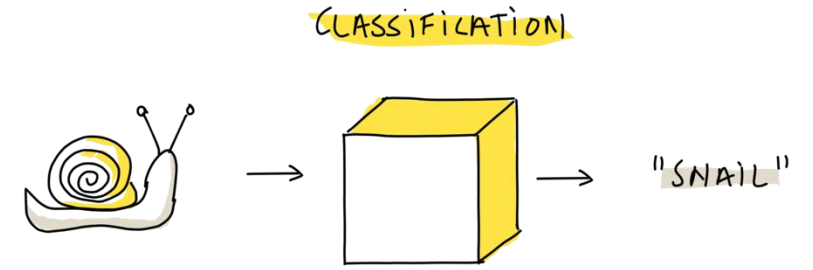
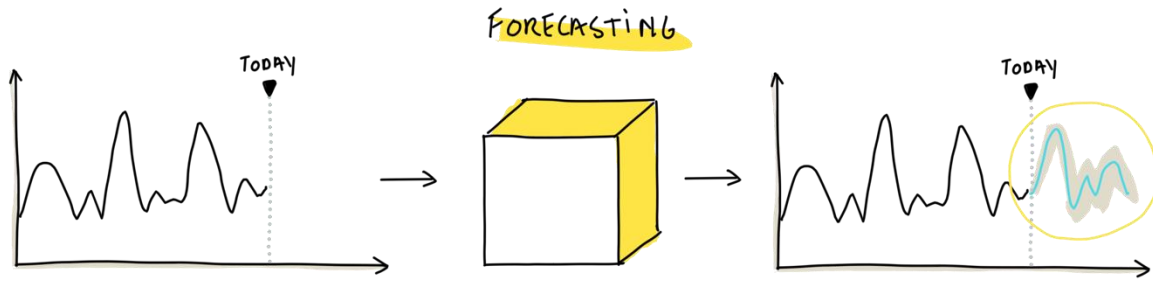


Your day awaits [Scan in store](#)

Grab Kale & Portabella Mushrooms  
Cruvère Sous Vide Egg Bites, a satisfying breakfast

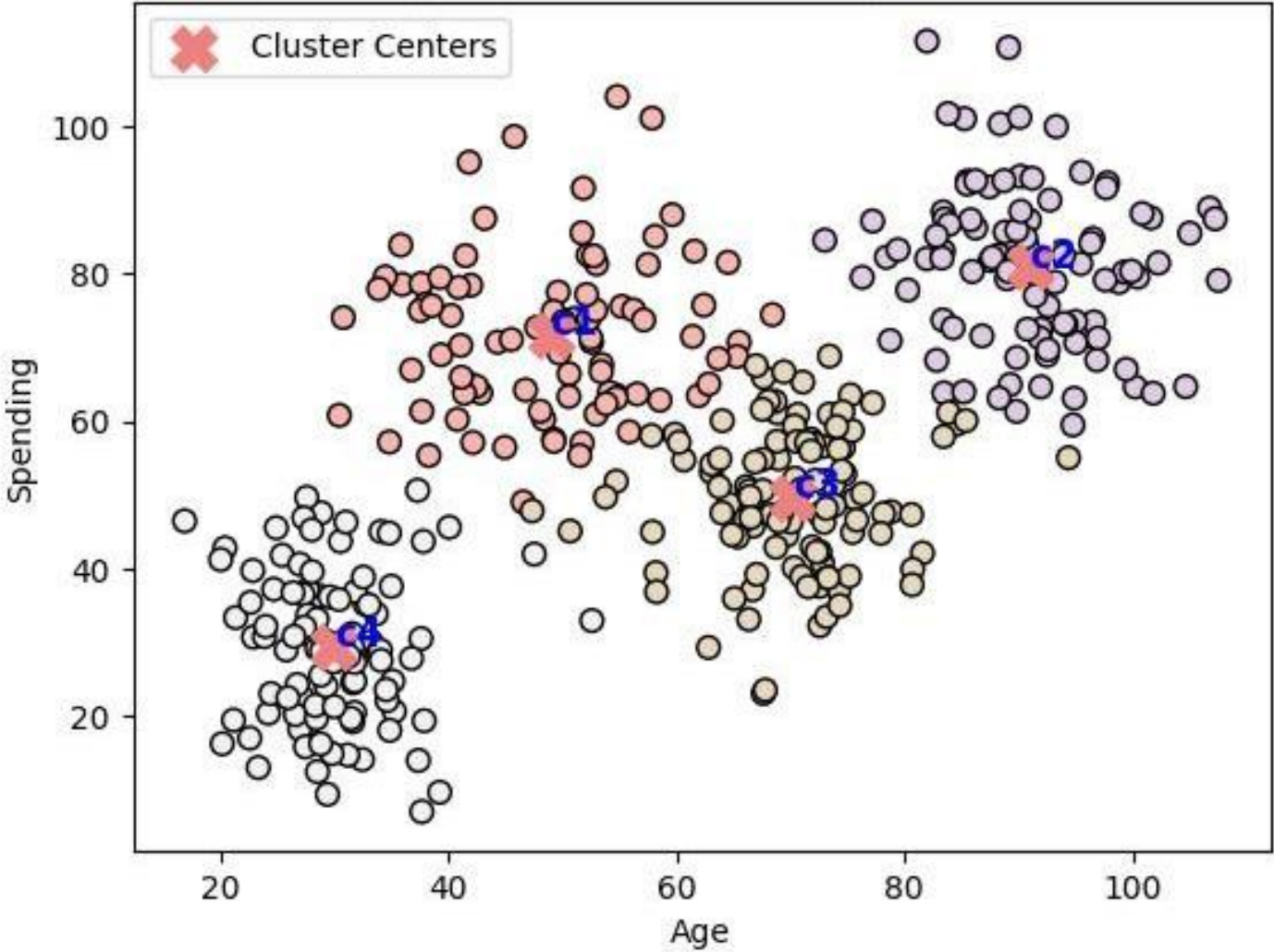
[Home](#) [Scan](#) [Order](#) [Gift](#) [Offers](#)

# AI Models have Varying Capabilities

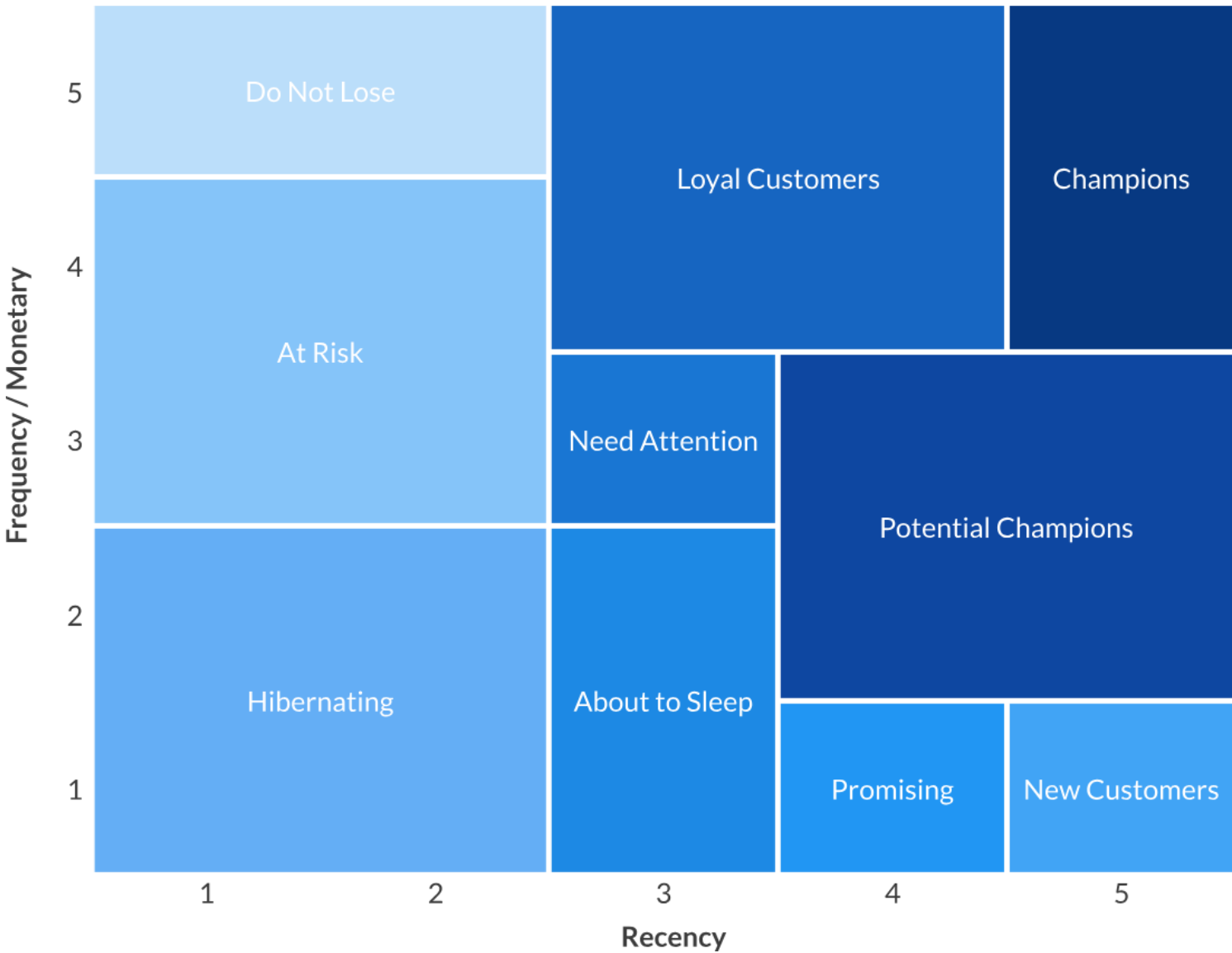


(**THERE EXIST MORE**)

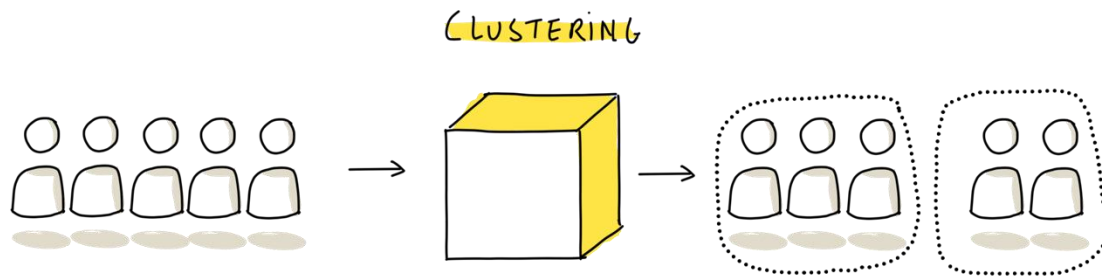
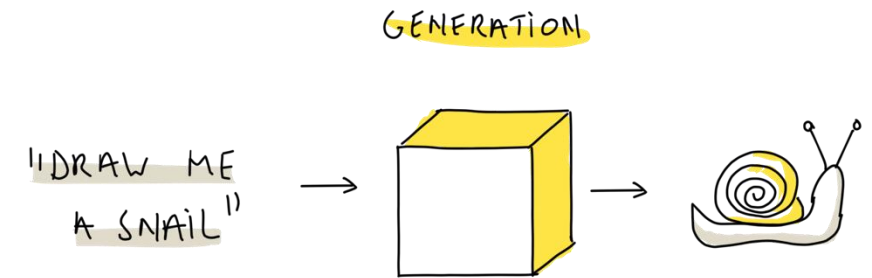
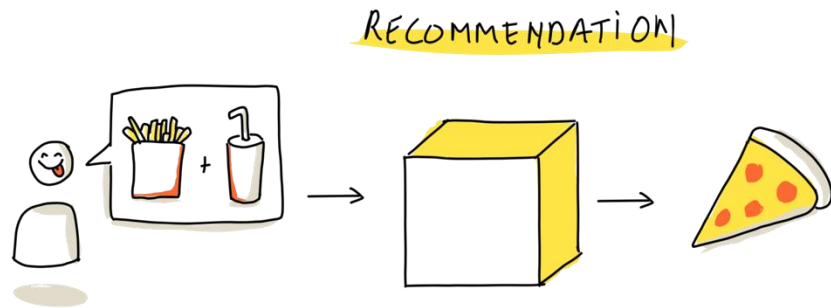
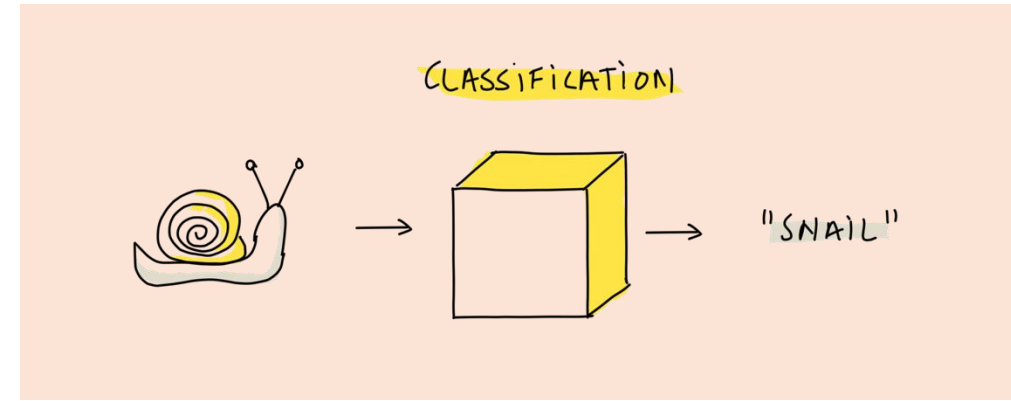
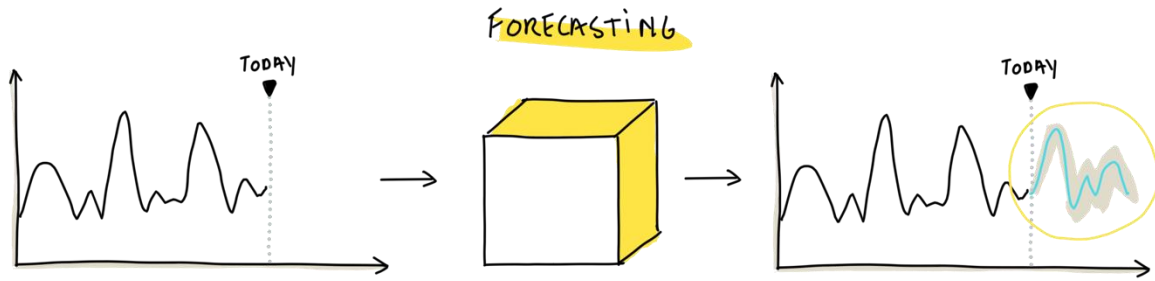
# Example: Customer Segmentation



# Example: Customer Segmentation



# AI Models have Varying Capabilities



(**THERE EXIST MORE**)

# Example: Spam Detection



Messages that have been in Spam more than 30 days will be automatically deleted. [Delete all spam messages now](#)

Sender	Subject	Date
verscompnigh87	Hello, this Sonipisova? my names is Rosemarie -- С уважением,	10:40 AM
Confirm Now.	sonipisov, please confirm your unsubscription	Aug 7
Public--Records	Your background check may be available online...[sonipisov]>>Check--Now<< - (2) Negative items may have been Added Your public Record Update...	Aug 6
Lucie, Zelená Země	Zvířata a bouřky? Známe řešení - Konopí a CBD pro vaše zdraví Přírodní doplněk stravy pro Vašeho psa CBD konopí dokáže zklidnit Vašeho psa i ...	Aug 1
CBD Today	Stop your pain now! - Anxiety? Depression? CBD could be a lifesaver	Jul 31
Quicken Loans Assoc.	Refinance and save - See New Mortgage Calculation: No Login Required	Jul 31
Mail Delivery System 2	Undelivered Mail Returned to Sender - This is the mail system at host pleski0041.hospedagemdesites.ws.hospedagemdesites.ws. I'm sorry to h...	Jul 30
Mail Delivery System 3	Undelivered Mail Returned to Sender - This is the mail system at host pleski0045.hospedagemdesites.ws. I'm sorry to have to inform you that yo...	Jul 29
Mail Delivery System	Undelivered Mail Returned to Sender - This is the mail system at host pleski12i0007.hospedagemdesites.ws. I'm sorry to have to inform you that ...	Jul 29
Mail Delivery System	Undelivered Mail Returned to Sender - This is the mail system at host pleski0041.hospedagemdesites.ws.hospedagemdesites.ws. I'm sorry to h...	Jul 28
sonipisova	Please Check Your Account - Wed,28 Jul-2021 Hello sonipisova, Welcome to Planet 7 Casino??. We need to confirm your info.... ??Planet 7 Casin...	Jul 28
Mail Delivery System	Mail delivery failed: returning message to sender - This message was created automatically by mail delivery software. A message that you sent ...	Jul 28
Mail Delivery System	Undelivered Mail Returned to Sender - This is the mail system at host pleski12i0003.hospedagemdesites.ws. I'm sorry to have to inform you that ...	Jul 28
Thank you	Re:You've been selected! - T. Mobile \$90 Date of issue: 01 July 2021 Order Number: 0933373- 90678968 Account: sonipisova@gmail.com Date of...	Jul 27
info	Aktuálne pracovné ponuky na Atena.sk - Vyber z 713 aktuálnych pracovných ponúk Opatrovateľstvo a zdravotníctvo Opatrovateľ/ka 5238 € za tur...	Jul 27
GlobeLife-Partner	sonipisova, You need to See This - Check out this official offer	Jul 26
ThePros	Finally find financial freedom - Wow! Borrow Up To \$50000! Cash is Wired into Your Account.	Jul 24
Lucie, Zelená Země	STOP migrénám s CBD konopím - Konopí a CBD pro vaše zdraví Přírodní a efektivní pomocník na Vaše migrény Jak CBD působí proti migrénám? ...	Jul 24
CapitalOne	RE: Winner Ticket No. 763545588	Jul 24

# Example: Fraud Detection

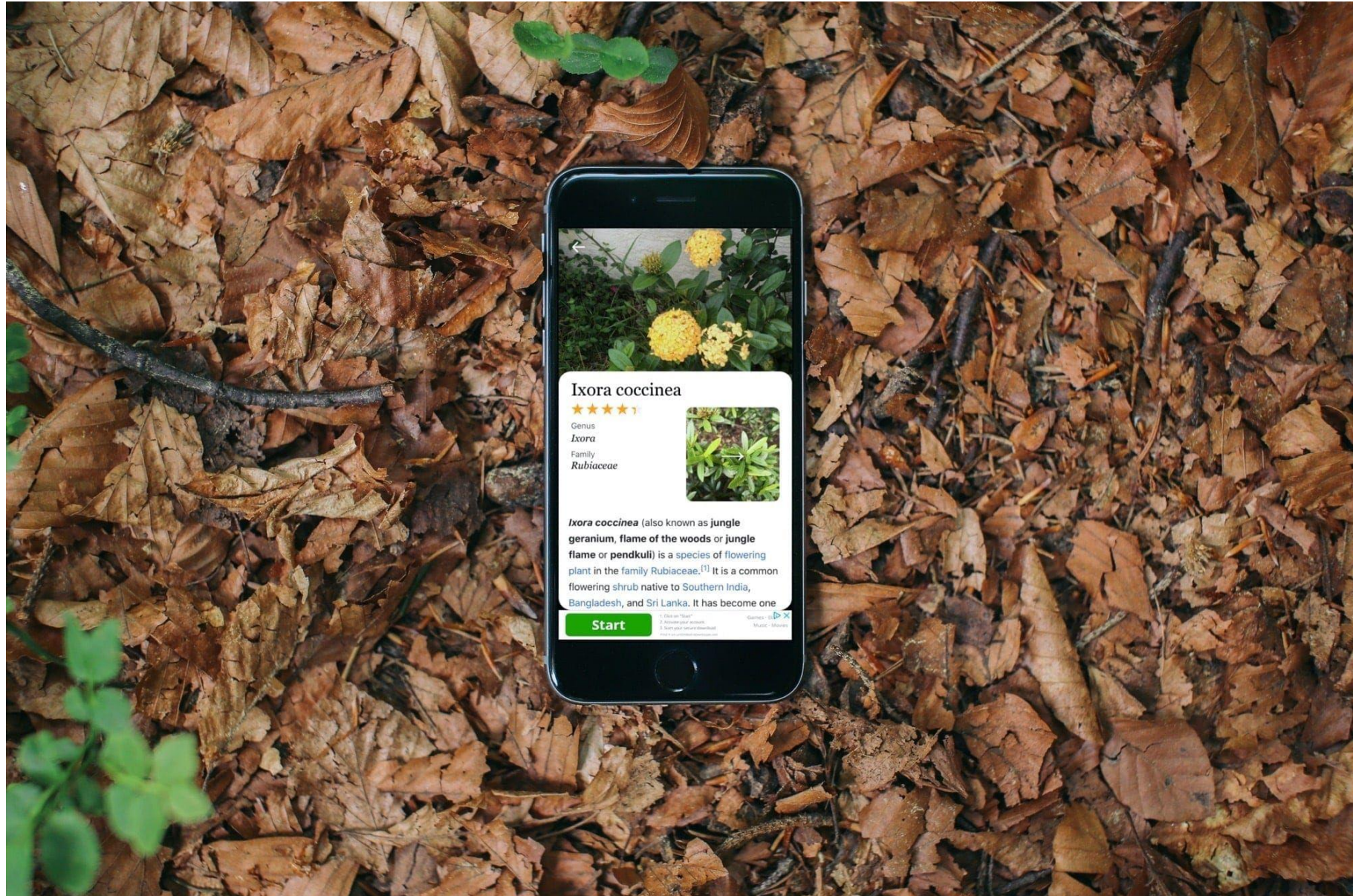


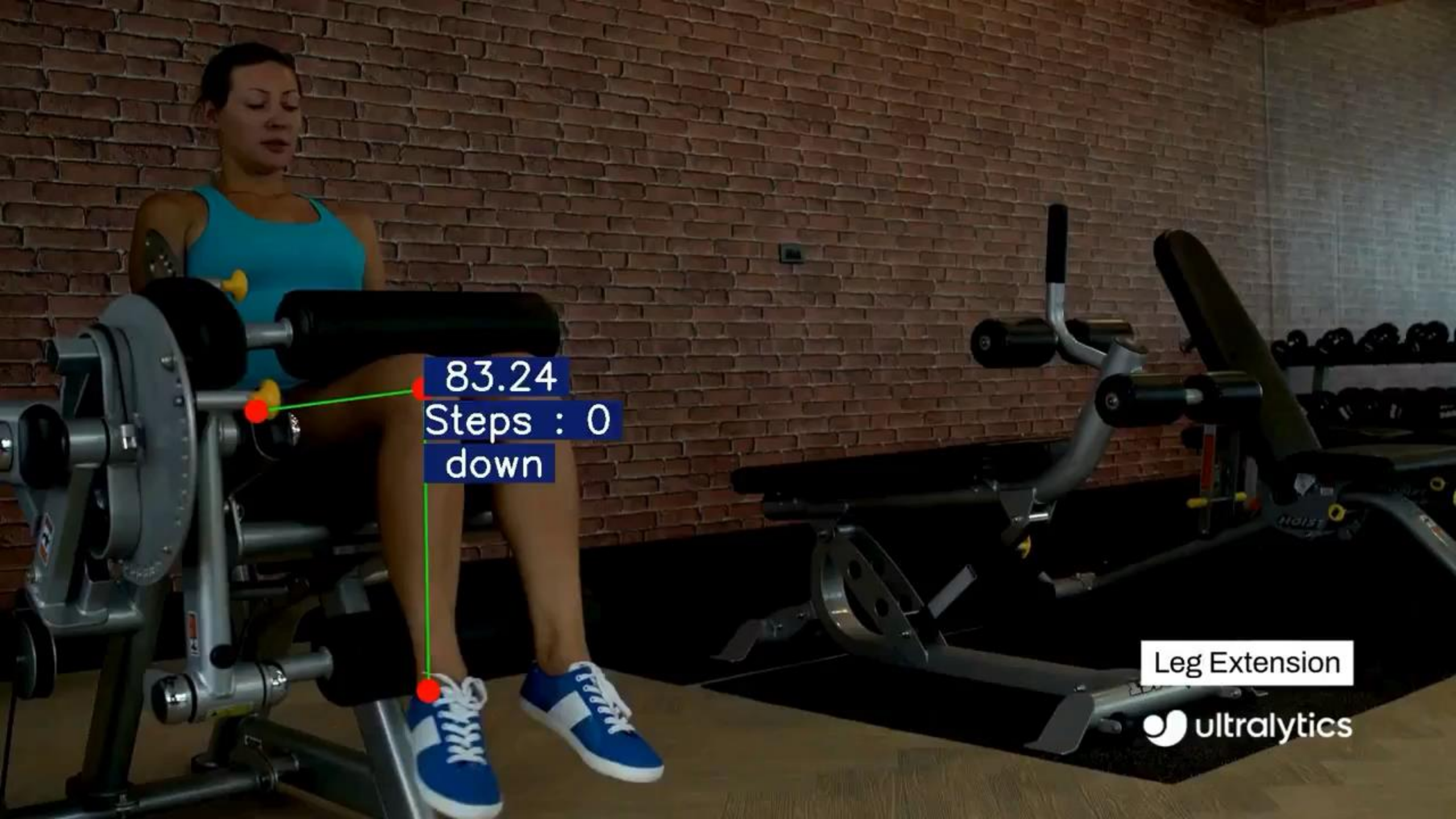
Chase Fraud: Did you use card 2613 at SHELL/SHELL on 07/13? Reply YES or NO. Msgs&rates may apply.

No

Chase Thanks. Your card can't be used until we speak to you. Call [800-454-9078](tel:800-454-9078) or the number on your card to turn it on or order a new one.


# Example: Flower and Plant Identification





83.24  
Steps : 0  
down

Leg Extension

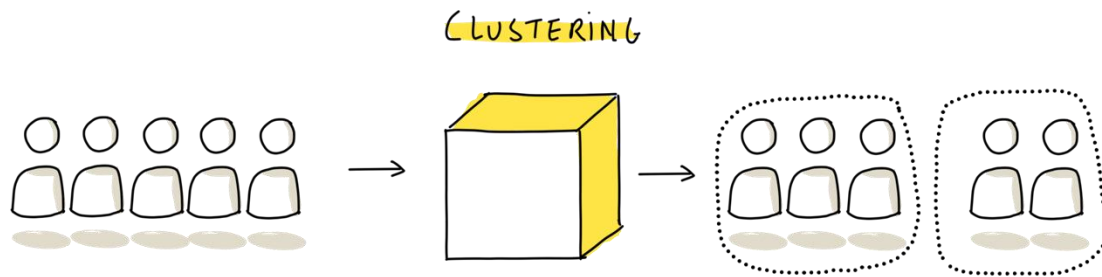
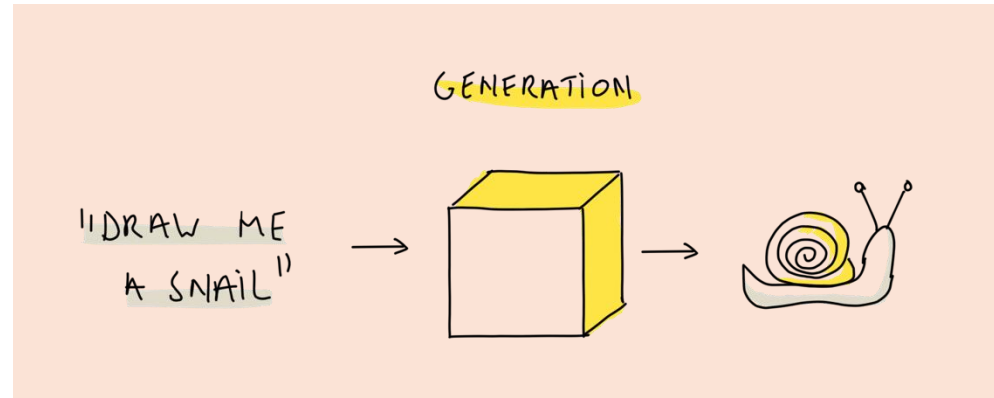
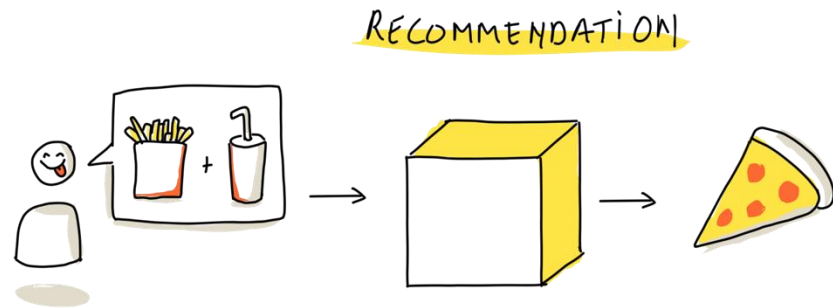
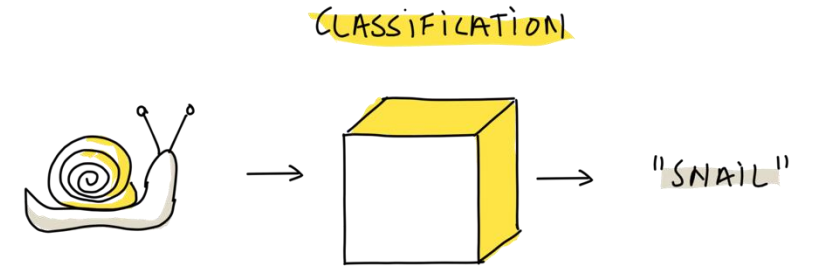
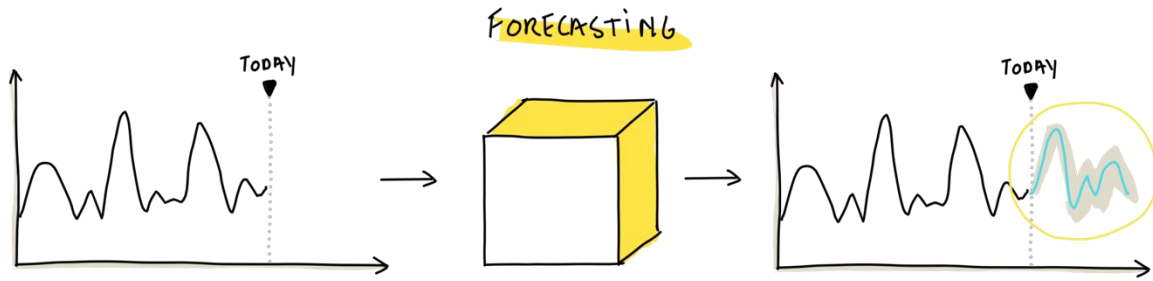
 ultralytics

Ik ben een patiënt

Scan  
the skin  
you're in

Ik ben een arts

# AI Models have Varying Capabilities



(**THERE EXIST MORE**)

# Example: Social Media Post Generation



## AI Post Generator

Prompt templates

Search for prompt

Suggested Favorite selections Custom

Facebook Instagram Twitter

LinkedIn Pinterest Google Business Profile

Your prompt

Imagine you're the social media manager for a trendy coffee shop called 'BeanBuzz.' Create an engaging social media post to promote our new seasonal drink, the 'Caramel Macadamia Latte.' Highlight its flavor profile. use enticing language.

Tone of voice

Polite Witty **Enthusiastic** Friendly

Informational Funny More

Approximate words 25

Generate hashtags


Include emoji

Posts to generate 3

Generate

### Get started

1. Pick a prompt from the left-hand side "Prompt templates" panel, use the 🔄 button to get a random prompt, or write one from scratch.
2. Write or edit your prompt with what you want the AI to generate and hit the **Generate** button.
3. Select the results you like and hit the **Use selected results** button.



# Example: Summarize Emails



✉ Mark as Unread   ↻ Sync   ...

**Summary by Copilot**


**Lydia** is providing an update on the progress of The Coral Gables Project, which has included the demolition of the roof and the installation of new materials. ①






There is a disagreement between **Tanko** and **Lydia** on which material to use for the shingles issue. **Lydia** is asking you for an opinion on how to resolve the dispute to finish the project as soon as possible. ②

**Henry** is asking you if there are any roof installers with more competitive prices that you've worked with. ③

① AI-generated content may be incorrect

**Coral Gables Project Update**

 **Lydia Bauer** Today at 9:30 AM

To:  Katri Ahokas  Henry Brill  Mona Kane  Tanko Laraba  Kevin Sturgis +2 more

# Example: Generate Product Descriptions



## Product descriptions

### Product name \*

What is your product called?

### Product features \*

Add product features and specs, either separated by lines or commas

Green  
Leafy  
Sustainably sourced  
Essential to human existence

Generate content

### #1

This Tree is the perfect addition to your yard. Not only is it stylish and green, it's also leafy and sustainably sourced. And it's essential to human existence, so it's the perfect way to bring life into your space.

### #2

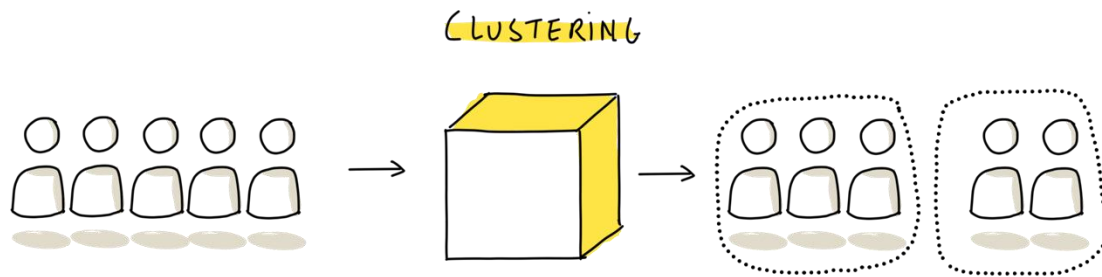
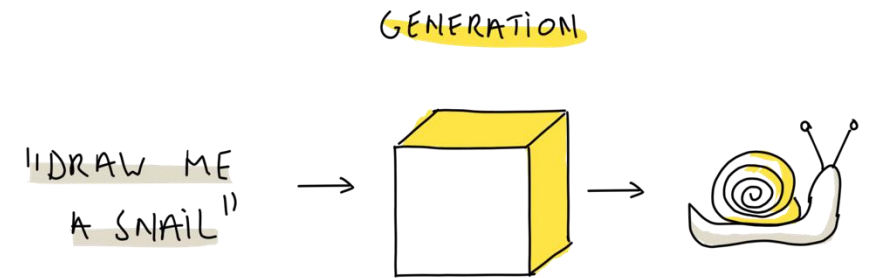
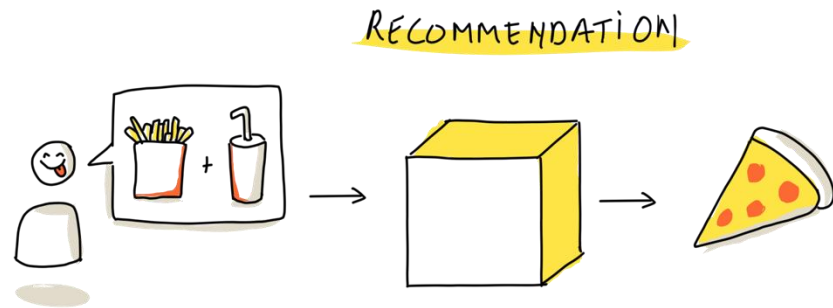
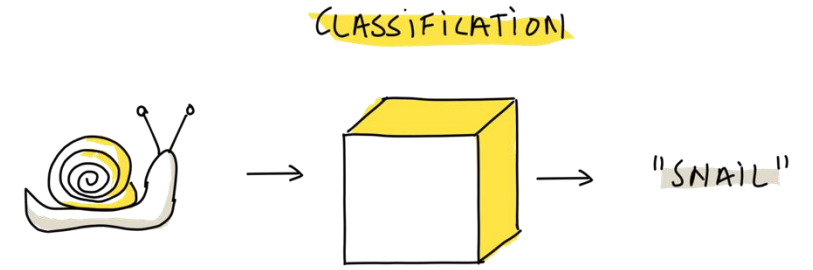
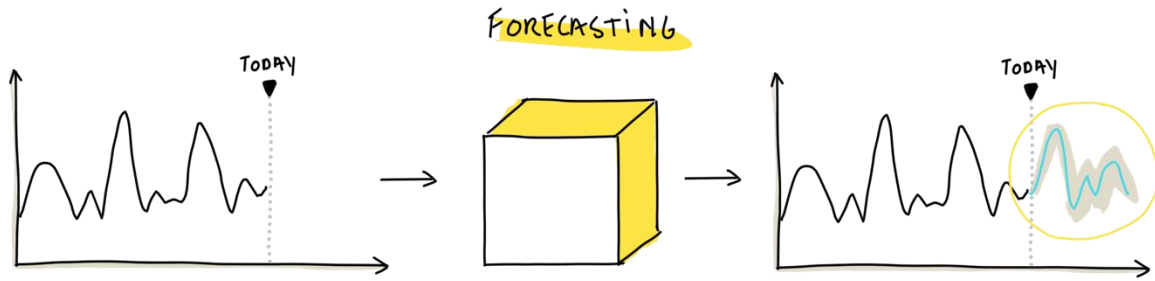
The Tree is a must-have for any yard. It's sustainably sourced, and it's essential to human existence! The Tree is a stylish green addition to your space, bringing a sense of true life.

### #3

The Tree is an essential part of any yard. It's sustainably sourced, leafy, and green. It's also essential to human existence, so it's the perfect way to bring life into your space.



# AI Models have Varying Capabilities

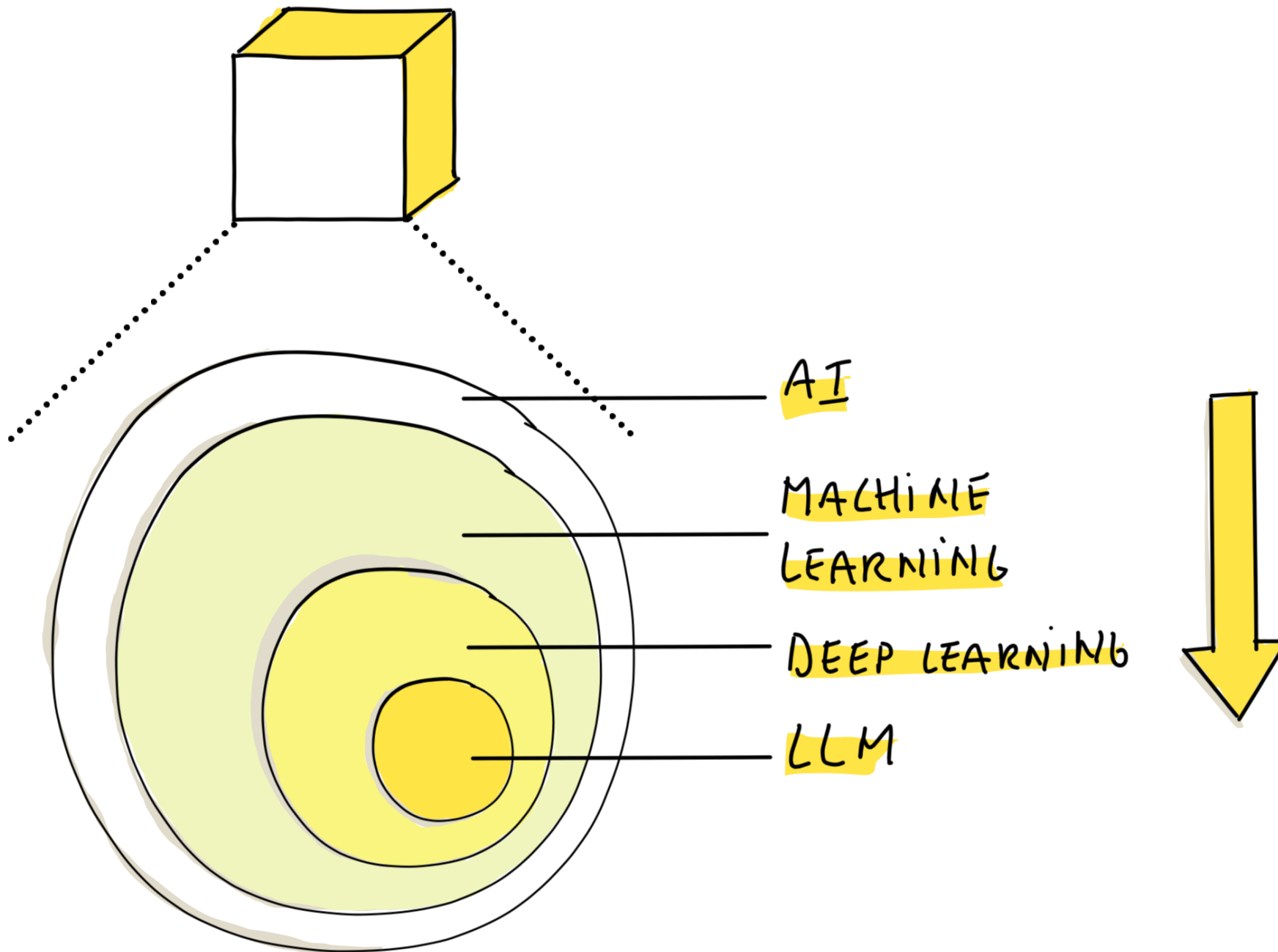


(**THERE EXIST MORE**)



# AI Introductie

- Historiek
- Wat is AI?
- AI Capabilities
- **Verschillende soorten AI**





# AI Introductie

- Historiek
- Wat is AI?
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