

# Enjoying new life at the age of AI

Anton Akusok, 11 April 2024

[anton.akusok@arcada.fi](mailto:anton.akusok@arcada.fi) | chat @ MS Teams



# Slow down & look around

The world has changed overnight,  
while we were distracted by “big news”.

Don't miss what is really important.

And what affect **you, *personally***.



# Slow down & look around

Move past the denial phase:

- Ask AI questions it answers better
- Leave to AI the skills it does better
- Look for opportunities in AI-first world (there are plenty)
- Look to improve your life with AI (it can)

Find a great place for yourself in this new world.

The world has changed forever...

# First mass Machine Learning





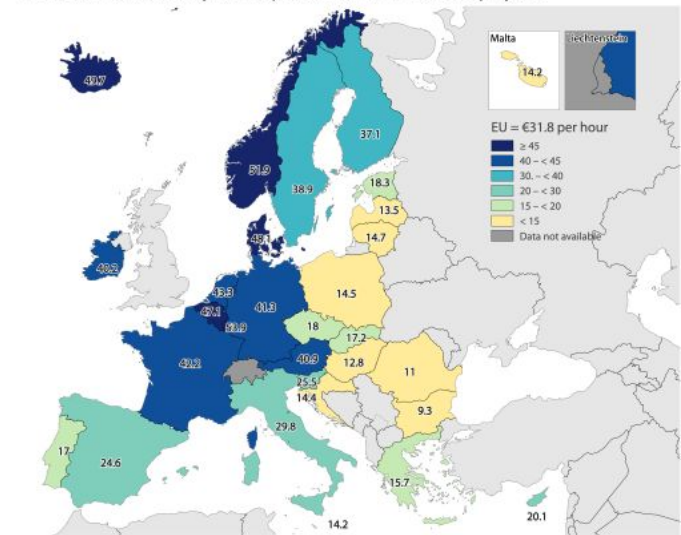
## First mass Machine Learning



# Labour cost is the huge driver for change

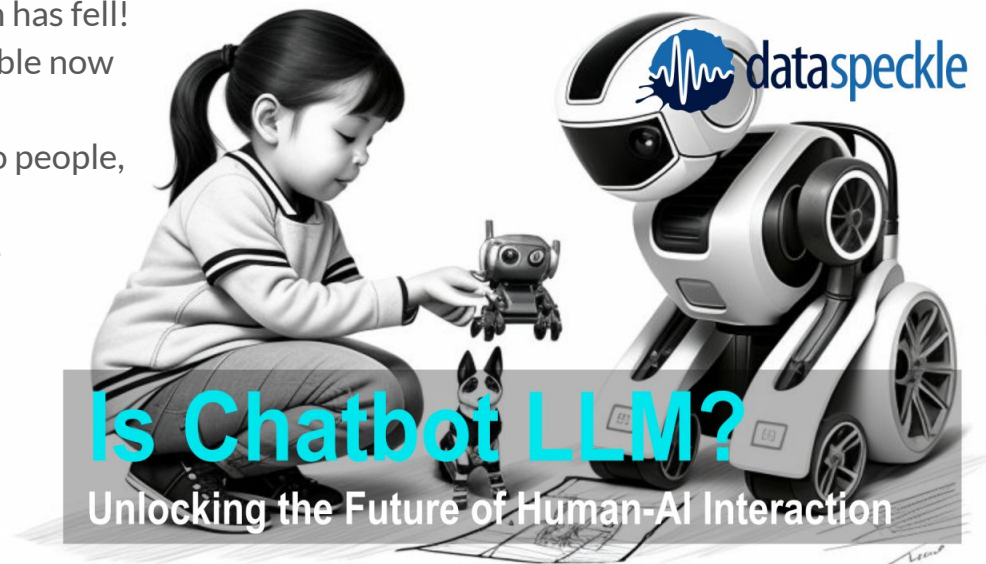
- Labour cost is great for us - higher salaries!
- Bad for companies and countries
- Businesses go to extremes to reduce labor cost:
  - Relocating to far-away countries and pumping them with money with unpredictable consequences
  - Automating everything possible and impossible (self-service)
  - Investing most in efficiency (~ reduction of labour cost)

Hourly labour costs, 2023  
in euro, whole economy\* (enterprises with 10 or more employees)



# The last bastion to human-machine interaction fell

- The last bastion to widest scale automation has fell!
- Native human-machine interaction is possible now
- Viable path for robots - being able to talk to people, they will now catch up fast
- Maybe in ~10 years robots are everywhere
- iPhone-scale revolution upcoming





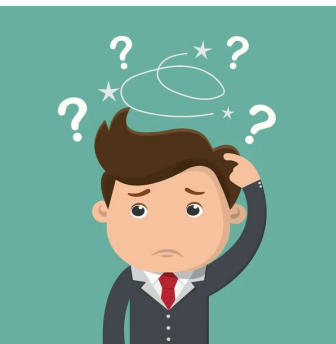
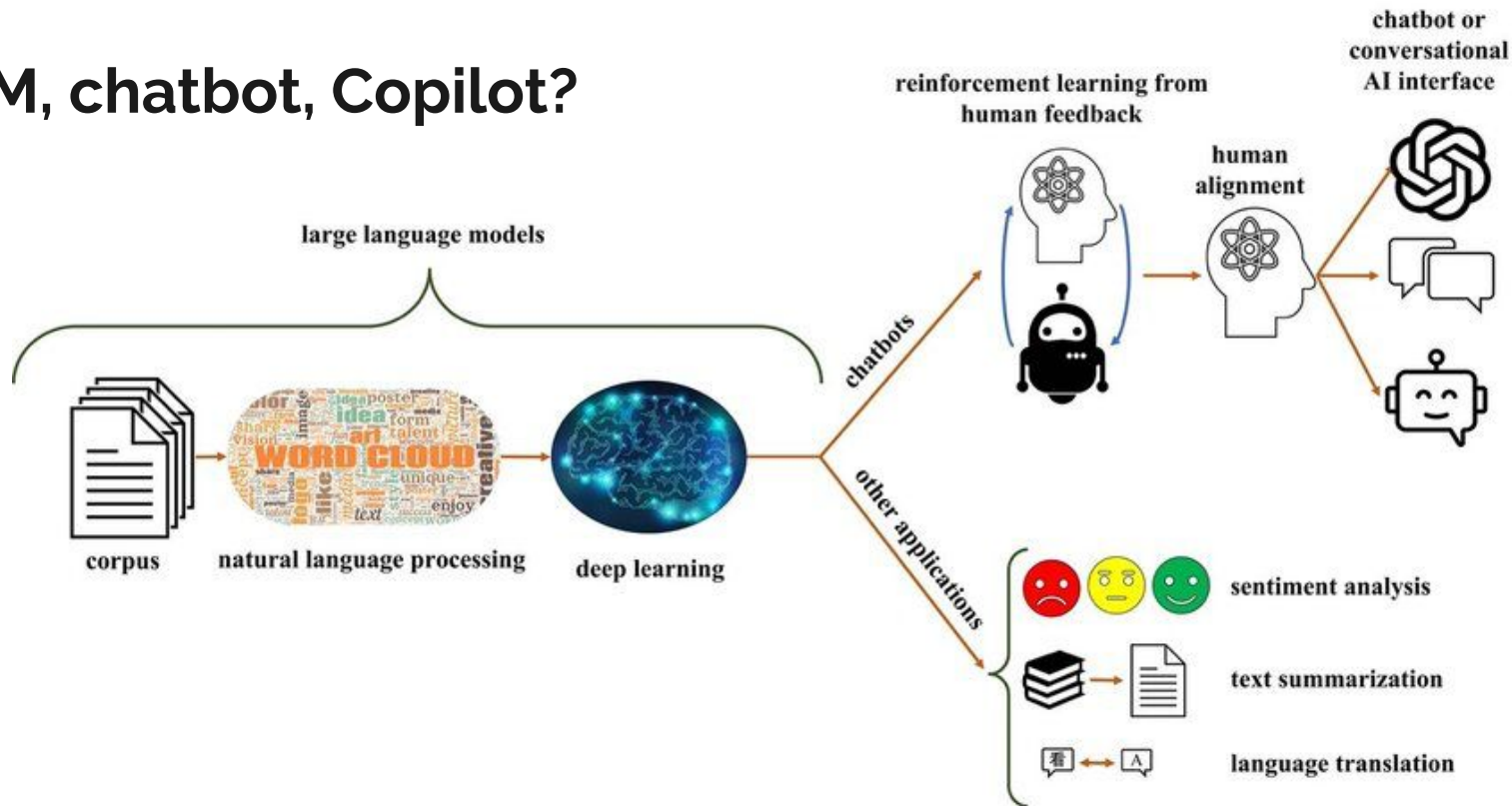
# What you see is (not) what you get

- Very early stage tech today
- Think future
- Be ready for the future



But what is an LLM?

# AI, LLM, chatbot, Copilot?



# Token processor is the king of AI

- Tokens are native to human language
- But tokens are strange objects that don't obey math rules like numbers do
- Still number-based AI lost to token-based AI

Current best AI works with strings of tokens (~words)



# Token processor is the king of AI

- Generative AI
  - ~ can write a string of tokens
- Large Language Model (LLM)
  - ~ learns on tokens (words) from *a lot* of text
- AI Assistant / LLM Assistant
  - ~ takes string of tokens as input (our question)  
and writes a string of tokens as output (answer)
- Chatbot
  - ~ AI Assistant online, doing a specific task





# Token processor is the king of AI

- “ChatGPT”  
~ a Chatbot from the original creators of this new AI
- “Copilot”  
~ AI assistant and Chatbot for coding from Microsoft
- “ChatGPT 3.5”, “ChatGPT 4”  
~ an LLM model, higher version is larger and works better  
used in *many services* like Copilot and ChatGPT itself
- “Llama”, “Codellama”  
~ a small LLM model that can run on a modern laptop,  
good enough for many tasks, free and open-source



## But how does it work?

Watch the [excellent Youtube series](#)

from:

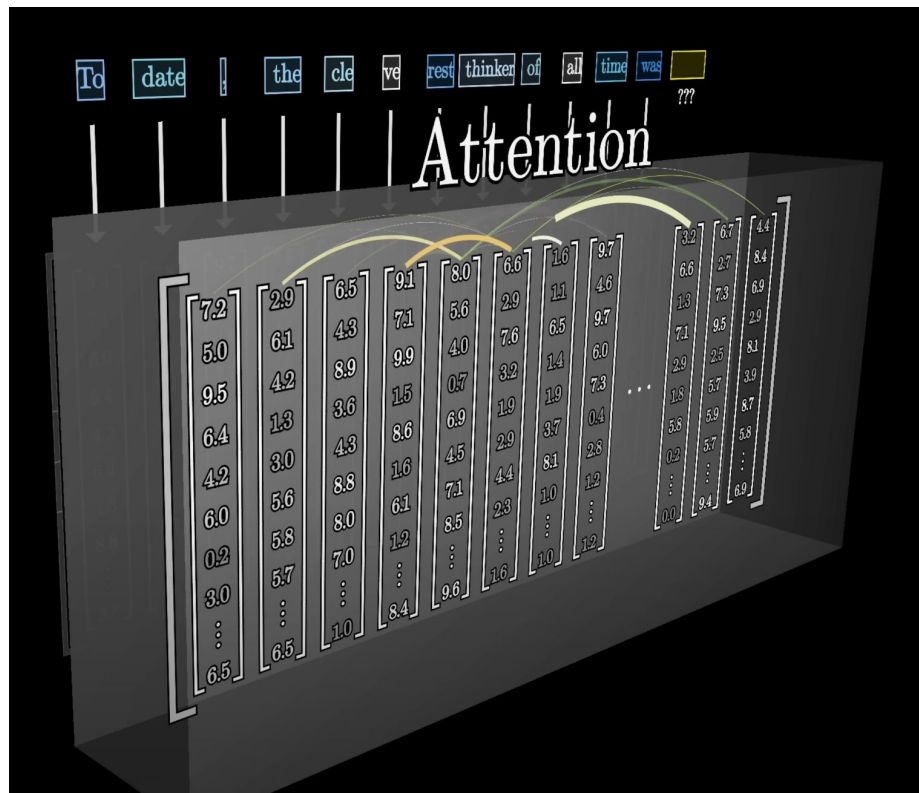


**3Blue1Brown** ✓

6.08M subscribers

They released 2 videos (4 more coming),  
each about 30 min long.

Best explanation with brilliant illustrations.





## In practice 1: Knowledge base

- Database or new Google that search by “meaning” instead of text matching
- Can write out answers that don’t exist!
  - It computes answer meaning, and then generates answer text from this meaning (“generative AI”)
  - Imagine Stackoverflow with an article for every programming question you can possibly have
  - Or a chatbot that talks to you like a person





## In practice 1: Knowledge base

- Database or new Google that search by “meaning” instead of text matching
- Can write out answers that don’t exist!
  - It computes answer meaning, and then generates answer text from this meaning (“generative AI”)
  - Imagine Stackoverflow with an article for every programming question you can possibly have
  - Or a chatbot that talks to you like a person
- **USE IT! ASK QUESTIONS! IT IS HERE FOR YOU, 24/7, LIKE NOBODY ELSE CAN EVER BE!**
- You can literally “*download Internet*” on your phone, and ask about anything while offline



## In practice 2: New computer interface

- Translates text questions to actions in programming code
  - e.g. “add Anton to users” → “INSERT INTO users (username) VALUES ('Anton')”
- Will probably replace screen buttons soon
  - ... and we will miss it like old people missed DOS screen
- Not here yet, but comes really soon
- Hardware and phone companies *already* work hard to support on-device AI assistants

How can AI improve my life?

# Become an expert at *anything*

- T-shaped skill profile with 1 expertise
- Limited by time on practicing a skill
- AI deepens the “shallow” parts of the T-profile
- Really helpful, very often!

Analyst	Programmer	Test Engineer	Web Designer	System Engineer
Write Executable Documents	Write Unit Test Code (xUnit)	Write Automated Tests	UX Design	DevOps
Requirements Engineering	Write Production Code	Functional Testing	Java Script, HTML, CSS, LeSS	Python, Perl, Go, shell
Write User Manuals	Design System Architecture, DB	Write Test Plan	Image, Icon, Logo Design	System and OS
...	...	...	...	...

**Broad** (diagonal label from top-left to bottom-right)

**Deep** (diagonal label from bottom-left to top-right)



## Become an expert at *anything*

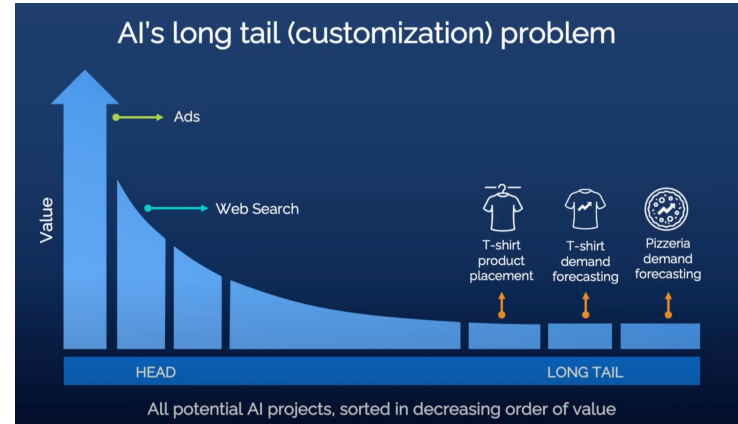
- T-shaped skill profile with 1 expertise
- Limited by time on practicing a skill
- No such thing as  
“I don’t know how to do it”
- Only  
“I don’t know that it exists”

		KNOWN	UNKNOWN
KNOWN	KNOWN	we are aware that... we know these things	we are aware that... we don't know these things
	UNKNOWN	we aren't aware that... we know these things	we aren't aware that... we don't know these things

Source: quadrants created and drawn by Dave Owczarek, inspired by Rumsfeldian logic

# More job opportunities than ever

- Minimum project cost limited by # of people involved say ~2M for 10 people
- Minimum # of people limited by all necessary skills
- AI enhances secondary skills, makes people generalists
- Less minimum people → smaller projects viable! say ~400K for 2 people
- MUCH more opportunities for smaller projects, at small businesses - right next to your place



Youtube - [How AI Could Empower Any Business | Andrew Ng | TED](#)



# Easier life than ever

AI will simplify everything that needs efforts today

- Paying taxes
- Making a presentation
- Writing project plan
- (someday) Robots


How do I *enjoy* my life  
at the age of AI?





**Things will change**

**Embrace the change**



## Cannot “sell a skill” → sell “solve a problem”

- True for some areas already for decades,  
Is true for programming today,  
Will be true for so much more in the future
- Skills get cheap, common, replaced by AI
- Or tasks that used to need skill,  
now get automated with the new AI as user interface
- “I can solve you a problem” always stay in high demand



# Be your own boss!

- Small projects cannot afford a separate “boss” who tells you what to do
- Big companies → exactly the same:
  - The “boss” people fully booked with high-level planning
  - Got no time “bossing around”
  - Only examples of real “boss” I heard of are leaders who prefer to work with 1-2 dedicated engineers, really an exception that highlights the general rule
- Personal initiative and being proactive never paid better!
- AI is literally made for proactive people

Read [The 7 Habits of Highly Effective People](#)

Like really, how could you not have read this book yet?

# Focus on communication skills

- Ridiculously important *everywhere*, yes even in programming
- Totally undervalued for *just how important* good communication skills are
- “Hard skills” like programming are replaced by AI,  
“soft skills” can never be replaced, and get more important as AI improves
- Communication is the limiting factor in projects already today, even more in the future
- Learn being nice, learn solve problems together even in bad mood, learn talking at different levels

read [Soulmate Sequence](#)

listen to Youtube series of Alexander Lyon



**Communication Coach Alexander Lyon**

@alexanderlyon · 594K subscribers · 462 videos

Welcome! I made this channel to help professionals and emerging leaders increase their L... >

[alexanderlyon.com/cca](#) and 2 more links

🔔 Subscribed ▾



# Love learning, then learn anything you want

- AI is a personal teacher to ask questions - the time-consuming part of learning
- Learn as much as you want, not as much as available (kinda true a long time already)
- Learning comprehensively is still a challenge: One skill is easy, a full set of skills is harder.
  - Find **someone who can teach**: online courses, online exams / certifications
  - Find out yourself by **doing a project**
  - Read a **good book**