

ChatGPT and the future of work

Training Workshop

Yleinen johdanto chatGPT:stä, miten se toimii, mitä se käytännössä tekee?

- Mihin se on hyvä ja missä on parantamisen varaa?
- Muut generatiiviset tekoälyt: Kuvat, video, musiikki.

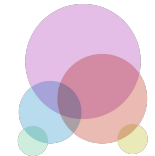
Esimerkkitapauksia työn nopeuttamiseksi yleisissä tehtävissä

- Oppiminen ja ongelman ymmärtäminen
- Tiedon tiivistäminen
- Aivoriihi ja luovuus
- Yhdessä kirjoittaminen, editointi ja tekstin parantaminen, monikielisyys
- Ohjelmointi ja muu automaatio

GPT Kieli ja sen "mielen" malli: kehotussuunnittelu

- Mikä on hyvä prompti?
- Temppuja saada siitä enemmän irti

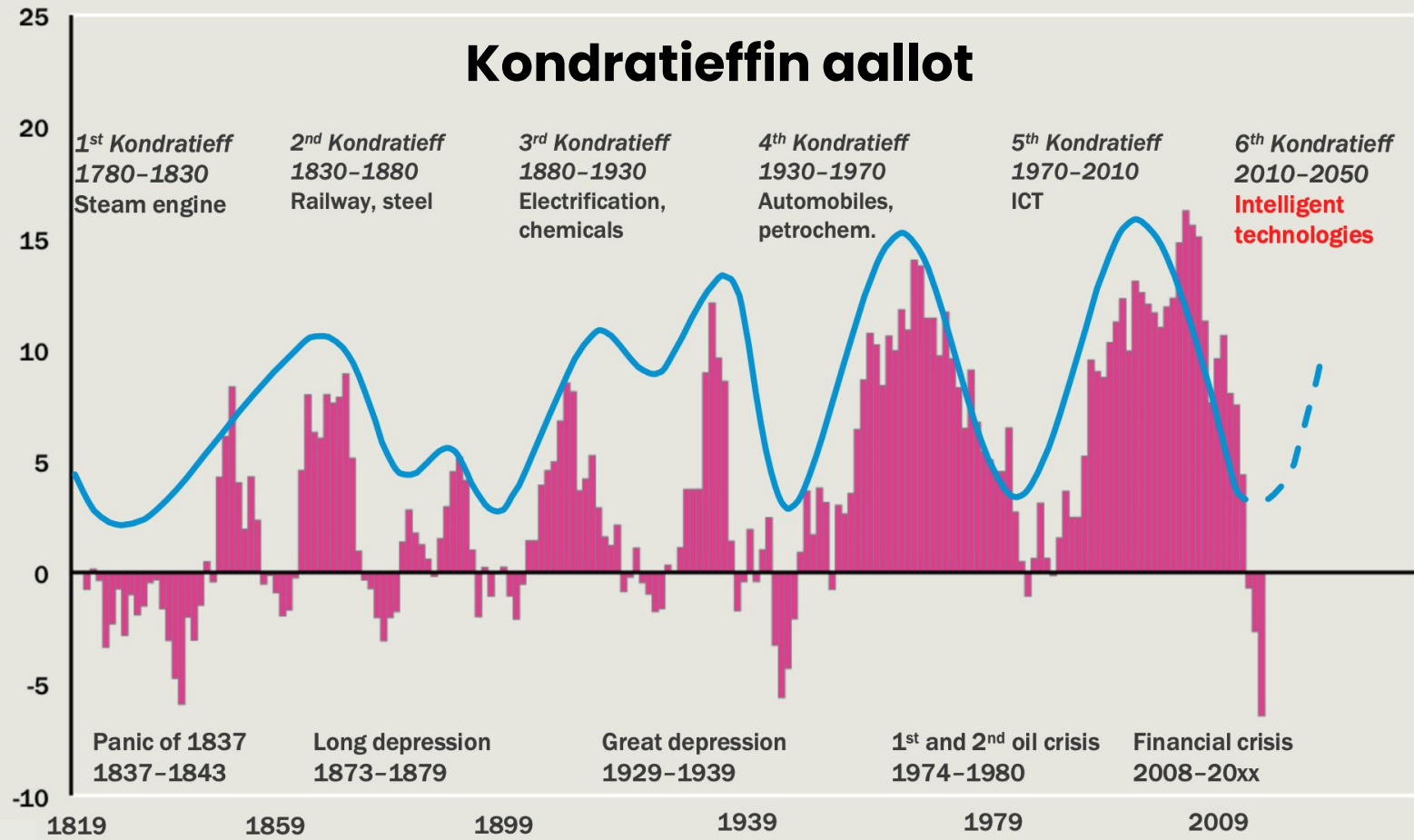
Käytännön työskentely



mindhive

making your ideas thrive in digital

Kondratieffin aallot



Rolling 10-year yield on the S&P 500 since 1814 till March 2009 (in %, p. a.). Source: Datastream, Illustration: Allianz Global Investors Capital Market Analysis

	1. sykli	2. sykli	3. sykli	4. sykli	5. sykli	6. sykli
Aikajakso	1780–1830	1830–1880	1880–1930	1930–1970	1970–2010	2010–2050
Veturi	Höyrykone	Rautatiet, teräs	Sähköistyminen, kemikaalit	Autot, petrokemikaalit	ICT	Älykkäät, resurssitehokkaat teknologiat:
Soveltamisala	Vaatetus- teollisuus	kuljetus	Massatuotanto	Henkilö- kohtainen liikkuminen	Informaation tuotanto ja viestintä	Perinteisesti ihmiselle kuulunut työ mukaan lukien asiantuntija- tehtävät

PERINTEINEN vs. GENERATIIVINEN TEKOÄLY

- *Kapea ja rajattu osaamisalue.*
- *Mallina matemaattinen optimointi.*
- *Perustuu isoon dataan soveltamisalasta*
- *Parhaillaankin hyvin rajalliset kyvyt oppia uutta*
- *Tavoitellaan virheettömyyttä*
- *Kyky yleiseen päättelyyn*
- *Luonteeltaan ihmisenkaltainen päättely ja ajattelu*
- *Perustuu isoon yleiseen opetusdataan (ei ainoastaan soveltamisalasta)*
- *Kyky soveltaa, tehdä olettamuksia ja sivistyneitä arvauksia*
- *Heuristinen logiikka, jossa keskeinen osa sen älykkyyttä on myös **kyky erehtyä**. (Ja myös oppia erehdyksistään)*

Tuoreita esimerkkejä työn murroksesta

Kaksi sovellusarkkitehtiä keskustelee:

<https://chat.openai.com/c/8890d0f9-5b61-4b37-a692-a38f860b1434>

Kirjallisen tuotoksen katselmointi

<https://chat.openai.com/share/e64fbeae-fc05-4f01-a9c9-45b28f785a1f>

Eri tekniikoiden nopeaa kokeilua

<https://chat.openai.com/share/19c8543c-f167-40e6-80cb-92f6efda12d0>



Text

Large Language Models that can perform multiple NLP tasks, i.g., understand, improve and create on existing text input.



Audio

Generative audio models, that utilize aspects of LLM to synthesize language, music or other audio.



Image

Generative models that understand language commands to improve and create AI images.



Video

Generative models that combine language and images to generate multiple-frame AI animations

Generative AI

Generative AI refers to a type of artificial intelligence technology that has the ability to create new content or generate new information. It uses complex algorithms and models to analyze existing data and learn from it in order to produce new and original content, such as images, text, or even music.

Generative AI can be thought of as a creative machine that can come up with new ideas or creations on its own, based on patterns and knowledge it has learned from existing examples.

Enhance your skills and cognitive abilities

Examples:

Concepts

Product

ChatGPT: How it works?

An association game.

Kuningas	Isä	Kukko	.....
.....	.....	Kana	.....
.....	Poika	.....	Karitsa

Taivas on (Sininen tai kaunis?)

ChatGPT: How it works?

An association game.

Kuningas	Isä	Kukko	.....
.....	.....	Kana	.....
.....	Poika	.....	Karitsa

Embeddings

Transformers

Memory

ChatGPT: How it works?

What is the next word in the sequence? And after?

Mitä kello on?	.....	.....
Milloin Suomi itsenäistyi?	.....	.....
Mikä on suosikki jäätelösi?	.....	.....

What if we help chat GPT to provide a better answer? With context? Or what else?

What is a prompt?

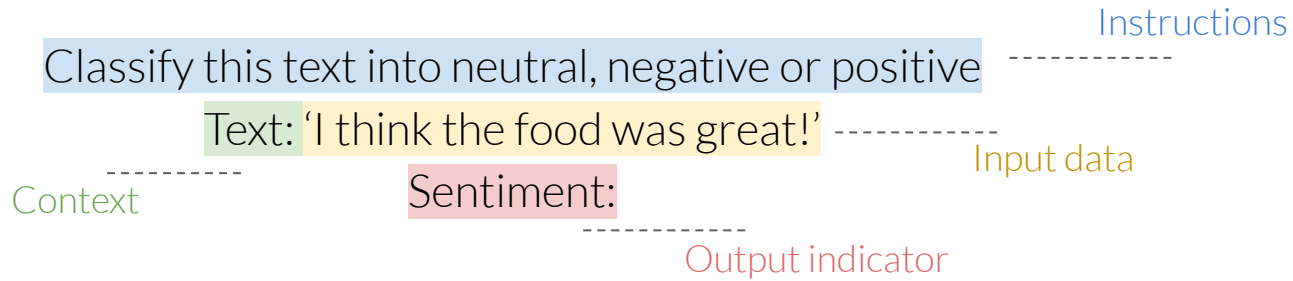
A prompt is a message or question that you give to an AI (LLM) to get a response. It's like a cue or instruction that tells the AI what to write about or respond to. The AI then uses this prompt to generate a relevant response.

A good prompt is key to getting the most useful and accurate information.

Chat GPT is not a search system! You get what you ask for.

Remember: Words have specific meaning and context.

Elements of a (good) Prompt



Answer:

The sentiment of the text "I think the food was great!" is positive.

ChatGPT Prompting Guide

1. Tone: Specify the desired tone (formal, casual, informative, persuasive).

4. Objective: State the goal or purpose of the response (inform, persuade, entertain).

2. Format: Define the format or structure (essay, bullet points, outline, dialogue).

5. Context: Provide background information, data, or context for accurate content generation.

3. Act as: Indicate a role or perspective to adopt (expert, critic, enthusiast).

6. Scope: Define the scope or range of the topic.

7. Keywords: List important keywords or phrases to be included.

8. Limitations: Specify constraints, such as word or character count.

9. Examples: Provide examples of desired style, structure, or content.

10. Deadline: Mention deadlines or time frames for time-sensitive responses.

11. Audience: Specify the target audience for tailored content.

12. Language: Indicate the language for the response, if different from the prompt.

13. Citations: Request inclusion of citations or sources to support information.

14. Points of view: Ask the AI to consider multiple perspectives or opinions.

15. Counter arguments: Request addressing potential counterarguments.

16. Terminology: Specify industry-specific or technical terms to use or avoid.

17. Analogies: Ask the AI to use analogies or examples to clarify concepts.

18. Quotes: Request inclusion of relevant quotes or statements from experts.

19. Statistics: Encourage the use of statistics or data to support claims.

20. Visual elements: Inquire about including charts, graphs, or images.

21. Call to action: Request a clear call to action or next steps.

22. Sensitivity: Mention sensitive topics or issues to be handled with care or avoided.

Six strategies for getting better results

1. Write clear instructions

If outputs are too long, directly ask for brief replies. If outputs are too simple, ask for expert-level writing. If you dislike the format, demonstrate the format you'd like to see. **The less GPTs have to guess at what you want, the more likely you'll get it.**

Include details in your query to get more relevant answers;

Ask the model to adopt a persona;

Use delimiters to clearly indicate distinct parts of the input;

Specify the steps required to complete a task;

Provide examples;

Specify the desired length of the output;

2. Provide reference text

GPTs can confidently invent fake answers, especially when asked about esoteric topics or for citations and URLs. **Remember it is not google search!** So provide base materials if needed.

Instruct the model to answer using a reference text;

Instruct the model to answer with citations from a reference text;

Six strategies for getting better results

3. Split complex tasks into simpler subtasks

Complex tasks tend to have higher error rates than simpler tasks. Decompose a complex system into a set of modular components. **Complex tasks can be re-defined as a workflow of simpler tasks in which the outputs of earlier tasks are used to construct the inputs to later tasks.**

Use intent classification to identify the most relevant instructions for a user query;

For dialogue applications that require very long conversations, summarize or filter previous dialogue;

Summarize long documents piecewise and construct a full summary recursively;

4. Give GPTs time to "think"

GPTs make more reasoning errors when trying to answer right away, rather than taking time to work out an answer. **Asking for a chain of reasoning before an answer** can help GPTs reason their way toward correct answers more reliably.

Instruct the model to work out its own solution before rushing to a conclusion;

Use inner monologue or a sequence of queries to hide the model's reasoning process;

Ask the model if it missed anything on previous passes;

Six strategies for getting better results

5. Use external tools

Compensate for the weaknesses of GPTs by feeding them the outputs of other tools (Use plugins!)

Use embeddings-based search to implement efficient knowledge retrieval;

Use code execution to perform more accurate calculations or call external APIs;

Find and use adequate plugins!

6. Test changes systematically

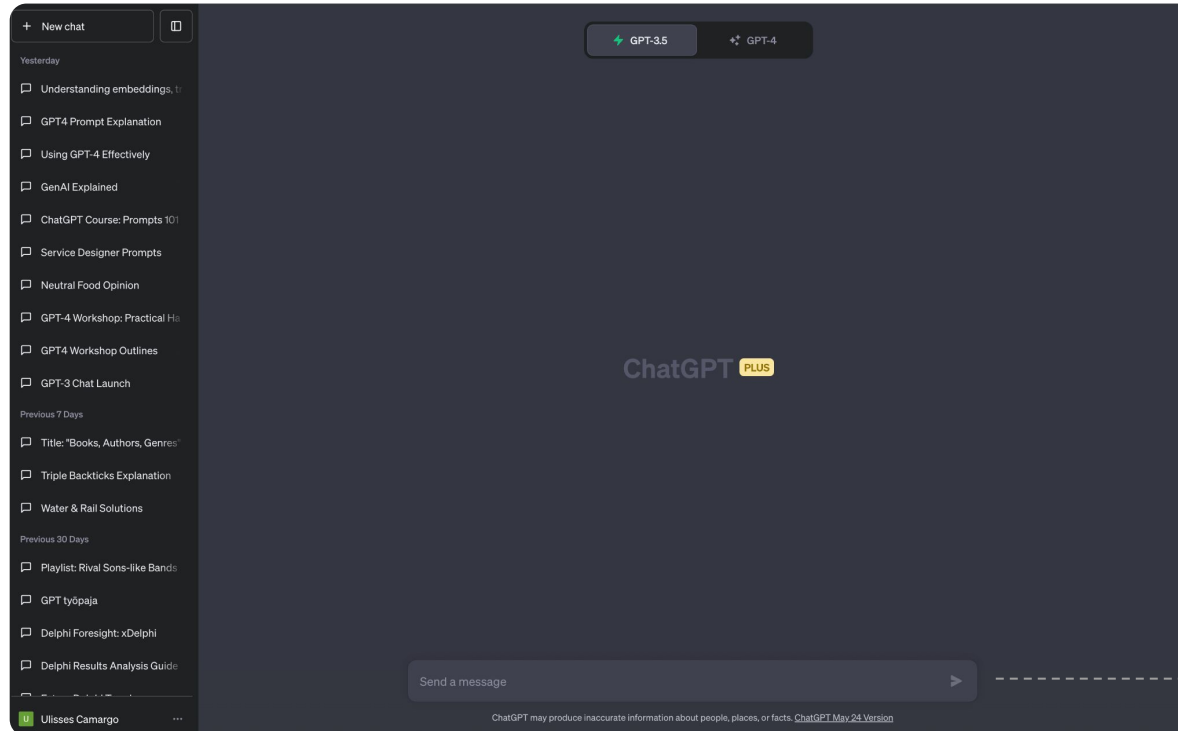
In some cases a modification to a prompt will achieve better performance on a few isolated examples but lead to worse overall performance on a more representative set of examples.

Evaluate model outputs with reference to gold-standard answers;

Use good and old common sense.

Harjoitukset

<https://chat.openai.com/>



Type here.

Oppiminen ja ongelmanratkaisu

Tiedon tiivistäminen

Aivoriihi ja luovuus

**Yhdessä kirjoittaminen, editointi ja tekstin
parantaminen, monikielisyys**

Ohjelmointi ja muu automaatio

Free experimentation

ChatGPT Prompting Guide

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