

Report on Card 3 - Vídeo: Prompt Engineering (I)

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1. Activity Description

Prompt engineering is a process which a person creates to orient a generative machine learning to create good quality acceptable solutions for a problem. In this field it's taught how to make instructions, which an A.I model can use to make the best from them.

A prompt is a text in natural language that requests a certain task from an A.I model. With these requests a machine learning model can do a lot of stuff, but sometimes the answers will not be satisfactory, this is where prompt engineering comes in. With the right knowledge of the field we can enhance our prompt and get better answers from the model. Here is an example of a basic struct of a Prompt:

- **Who I am:** You are a specialist on marketing, social media and human psychology.
- **Script:** I want help to create a script for an instagram reels.
- **Objective:** My objective is to call everyone's attention with an engaging story. and ask everyone to follow me after that.
- **Model:** I want a result splitted in 8 to 10 slides with image suggestions in each one.
- **Panorama:** My client is an expert who sells online courses and has been facing difficulties to enhance them.
- **Transform:** You can enhance X and adjust Y etc.

As said by Bruno Picinini, the teacher from card 3, it's not necessary to follow these steps by this order exactly. His video that is the content of card 3 teaches about how to get the best results in prompt engineering by enhancing and through this report i'll be describing some of them.

1.2 Zero Shot

Zero Shot is described by being the simple act of specifying what you want to a generative model without giving any examples. This approach is not recommended since by giving examples the results tend to get much better than without examples.

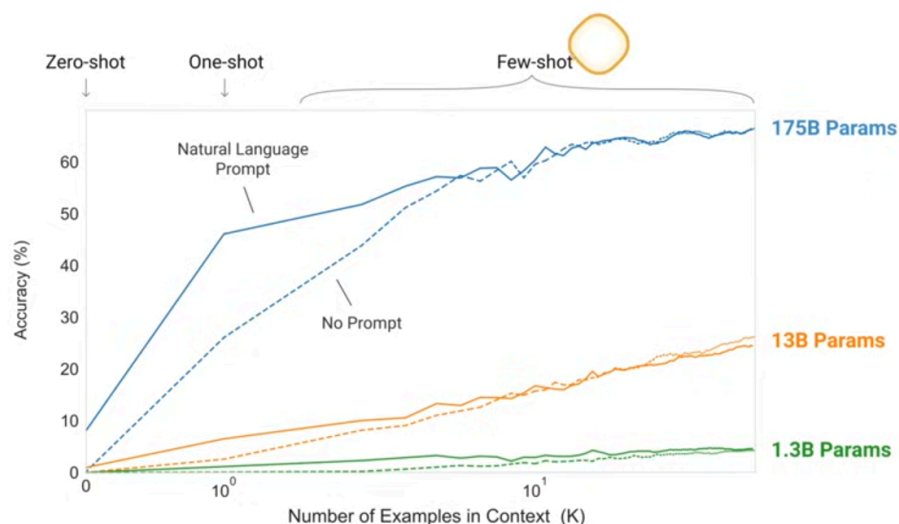
1.3 Directional Stimulus Prompt

This technique is based on giving the model hints, examples or stimulus. By doing this it's guaranteed that the result will come better as can be seen below in the example. Some hint words were used to make summarizations better. The model will organize the text in a manner that will make it more interesting for me.

Directional Stimulus Prompting	Standard Prompting
Q: Summarize the above article briefly in 2-3 sentences based on the hint . Hint: Bob Barker, TV, April 1, "The Price Is Right", 2007, 91.	Q: Summarize the above article briefly in 2-3 sentences.
Model output A: On April 1, Bob Barker returned to the TV show "The Price Is Right" after eight years. Looking spry at 91, Barker handled the first price-guessing game. Barker stepped down as host in 2007, but didn't seem to miss a beat.	Model output A: Bob Barker, the former host of "The Price Is Right", returned to the show for the first time in 8 years. He hosted the first game of the show, and then handed the hosting duties over to Drew Carey.
ROUGE-1: 48.39 👍	ROUGE-1: 34.48 👎

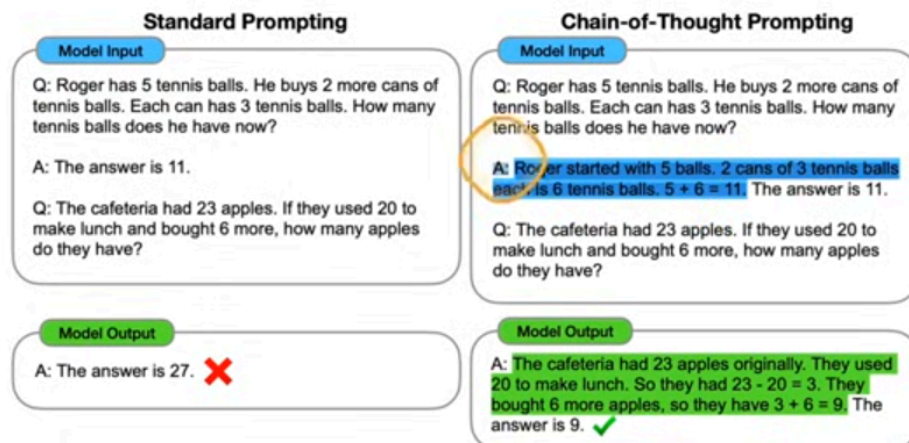
1.4 Few Shot

Few Shot is a technique based on just giving a model some examples, by doing this the model will certainly give good results. It can be seen in this graph below.



1.5 Chain of Thought

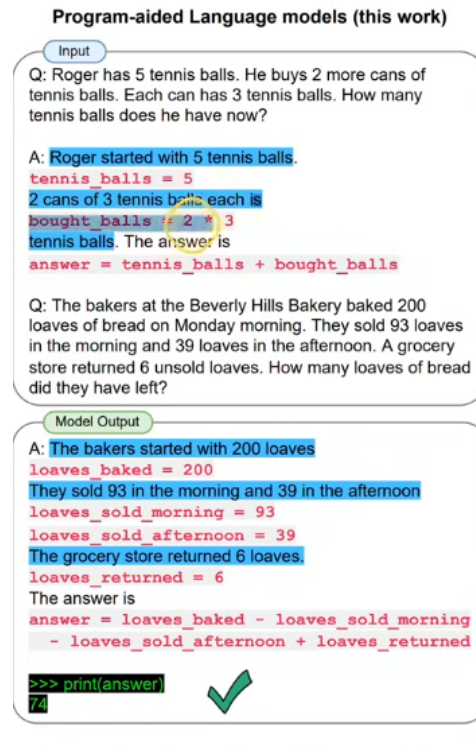
The chain of thought technique follows a more logical way to think, therefore giving the model examples of how to think, how to do it. This technique avoids void statements and uses logical thinking to solve a problem like in the example below.



As it can be seen here, the output on the left turned out correct because before the asker made the second question he/she taught the model how to think. Another way to enhance the outputs is to show wrong examples of logical thinking, this technique is called **Contrastive Chain of Thought**. Telling the model to do an undertaking step by step also works, this technique is called **Zero shot Chain of Thought**.

1.6 Assisted Programming Language

Another Prompt technique used to get good results is the assisted programming language. It has the same thinking behind the chain of thought but instead of using text, we use algorithms to show the model how to think.



These are just some prompt engineering techniques taught by the teacher.

Conclusion

Prompt engineering is a set of knowledge about how to get efficient and better outputs from generative models. What the video from card 3 teaches is what is prompt engineering and some of the existing techniques used to perform that.

References

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Large Language Models are Zero-Shot Reasoners:

<https://openreview.net/pdf?id=e2TBb5y0yFf>