

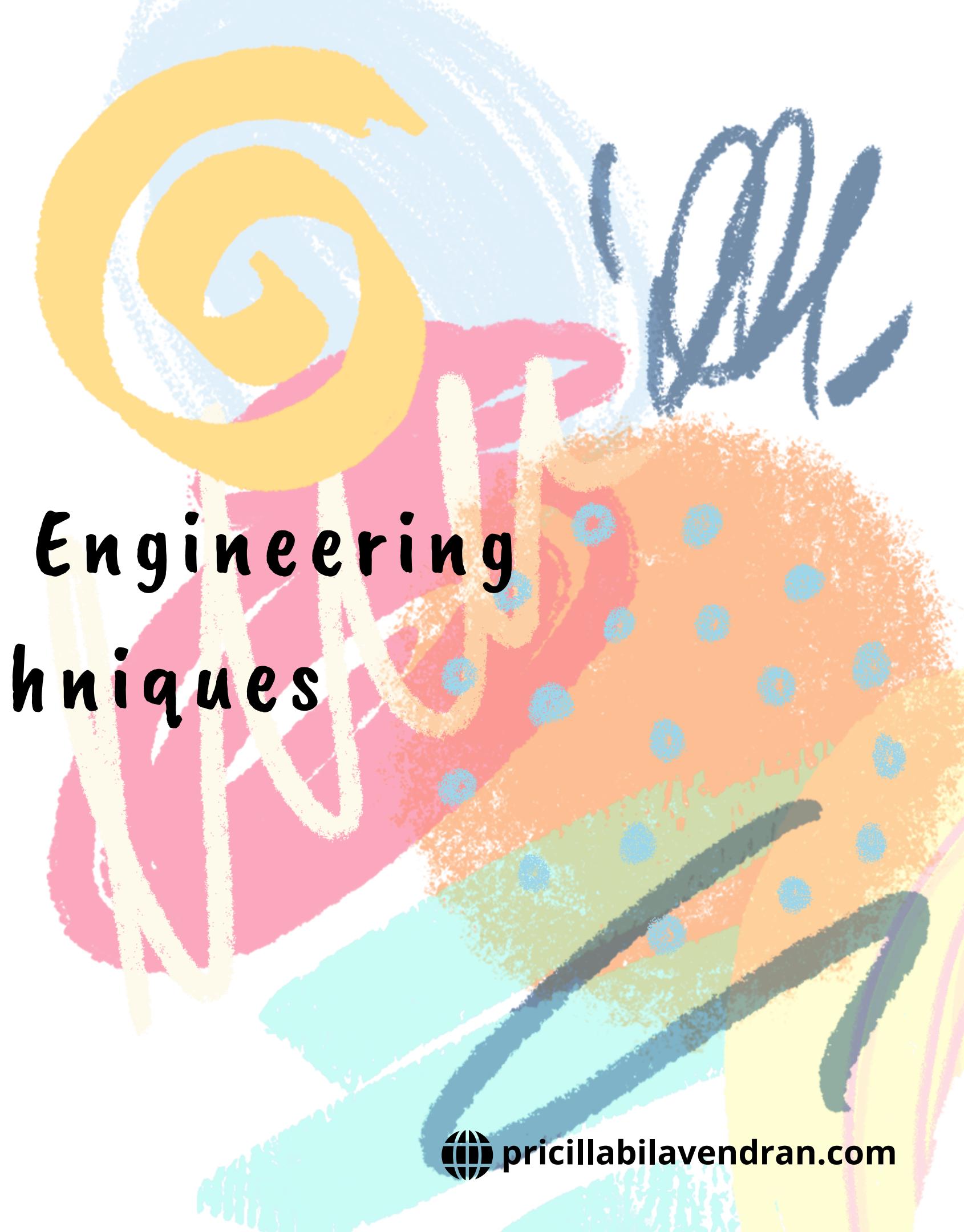
MASTERING THE ART OF PROMPT

ENGINEERING

Elevating Your Testing
Game

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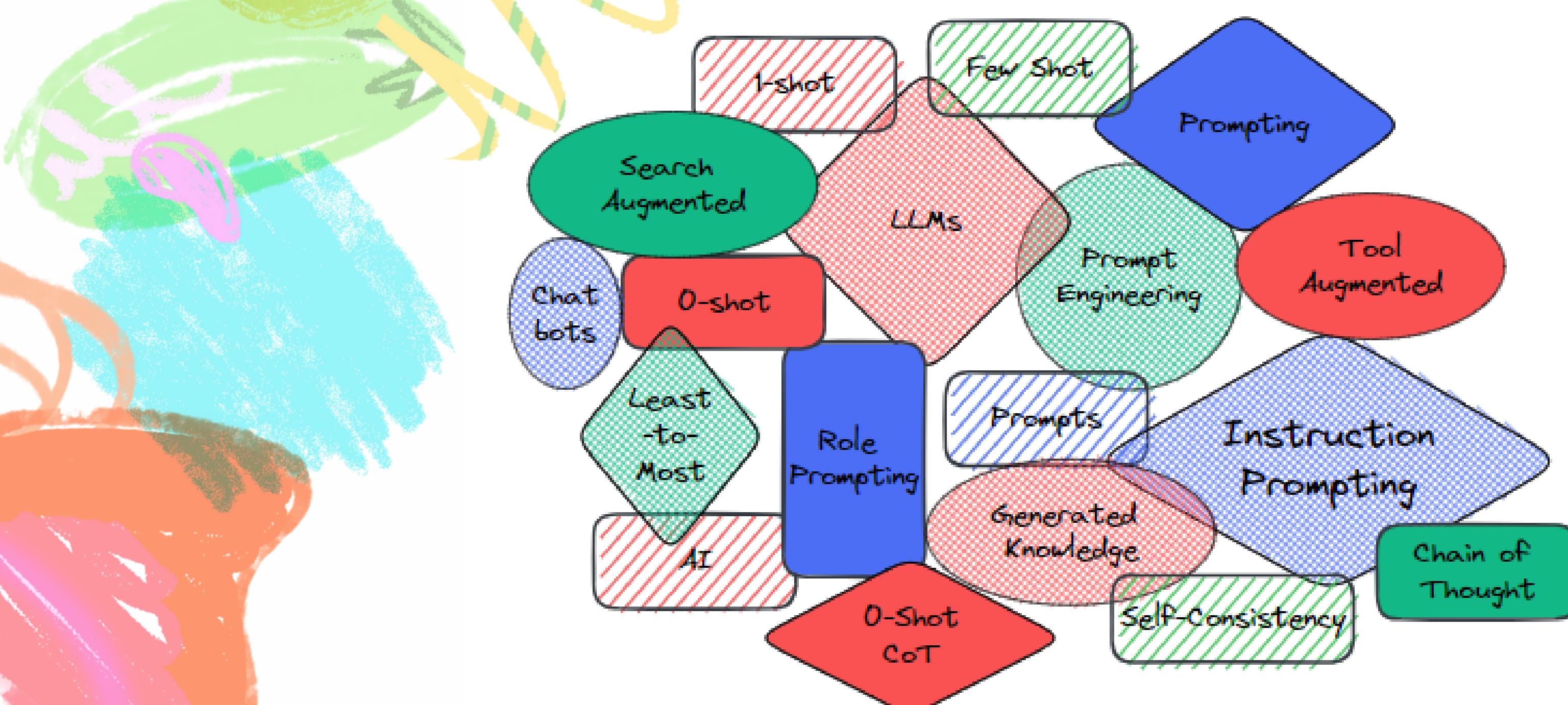
Hello there!!

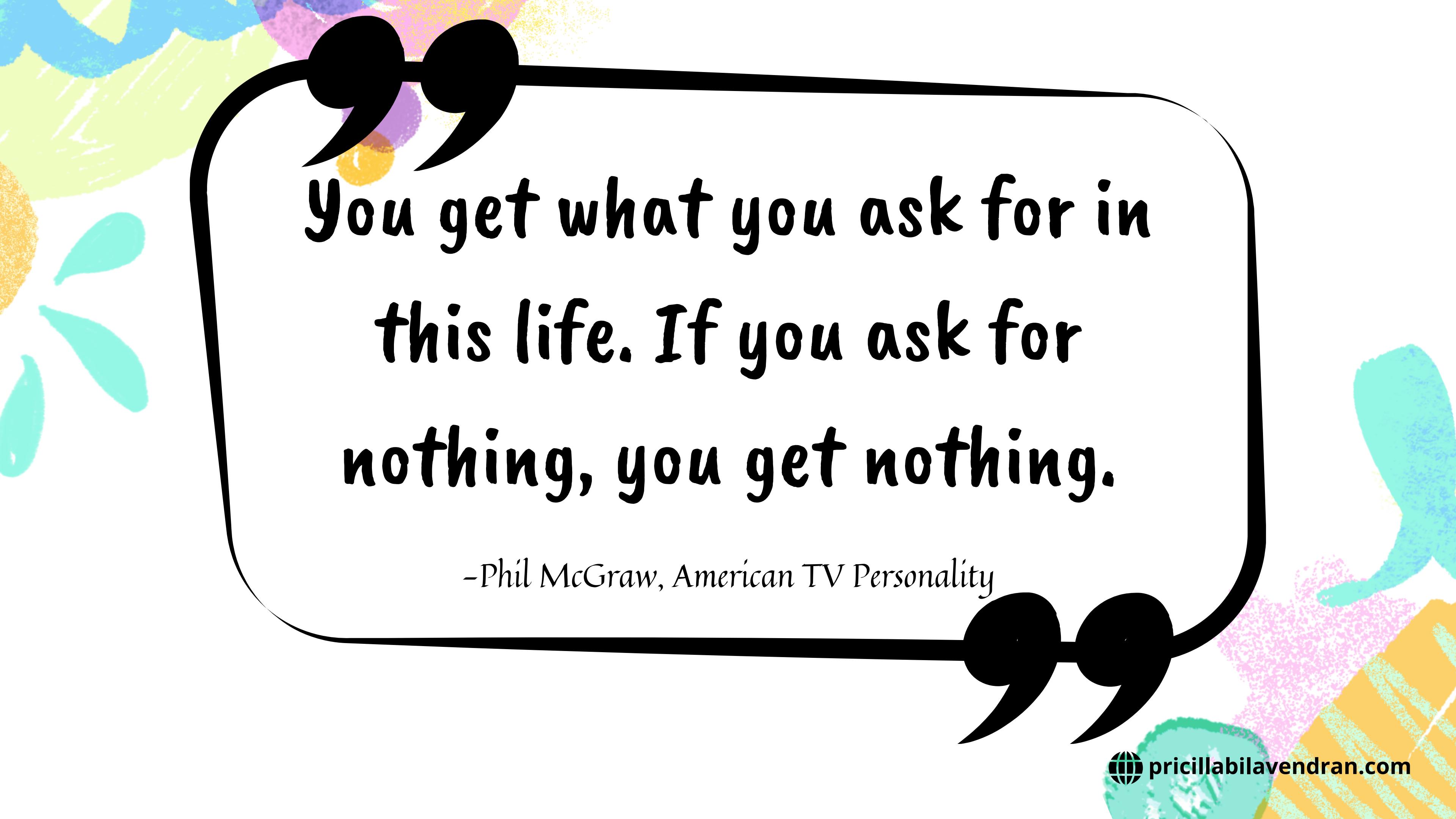
I'm Pricilla Bilavendran



Seasoned Test Engineer with 12 years of diverse QA experience. I'm a Postman Supernova, API aficionado, and AWS Community Builder. My passion lies in empowering others, fueling innovation, and making a positive impact.

Introduction





You get what you ask for in
this life. If you ask for
nothing, you get nothing.

-Phil McGraw, American TV Personality

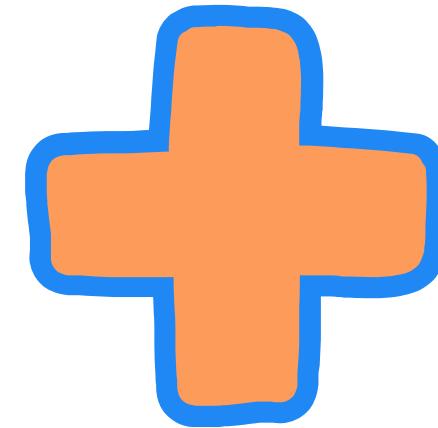
What is a Prompt?

Prompts are just texts that are designed to explain or instruct the Generative AI Models to produce the desired outputs



What is Prompt Engineering?

Prompts



Dictionary

Definitions from [Oxford Languages](#) · [Learn more](#)



engineering

/ˌen(d)ʒɪˈnɪərɪŋ/

noun

1. the branch of science and technology concerned with the design, building, and use of engines, machines, and structures.
2. the action of working artfully to bring something about.
"if not for his shrewd engineering, the election would have been lost"



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Prompting Techniques

Instructions

Instructing the AI to perform certain task.

Ex: Summarize, Drafting an Email etc.

Role Play

Providing a role and asking the AI to act and respond accordingly. Ex: Imagine you are a Doctor

N-Shot

Providing examples to AI and ask to answer the situation

Types of Shot Prompting

Zero Shot

Prompt without any example.



What's $2+2$



$2 + 2$ equals 4.

One Shot

Prompt with one example.



If $3+3 = 6$, what's $5+5$?



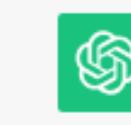
If $3 + 3$ equals 6, then $5 + 5$ equals 10.

Few Shot

Prompt with multiple examples.

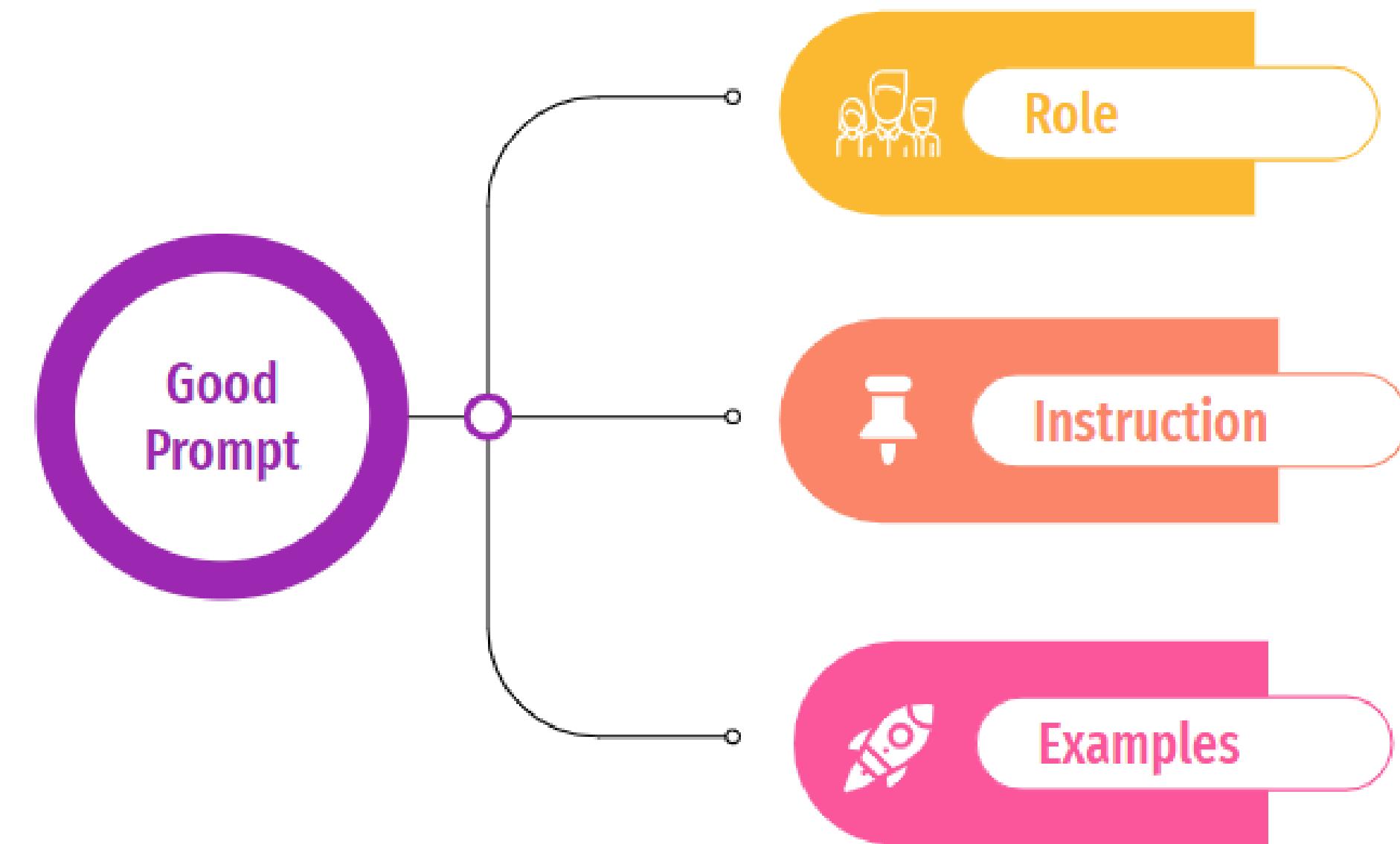


If $2+2 = 4$, $3+3 = 6$, what's the value of $4+4$?



If $2 + 2$ equals 4 and $3 + 3$ equals 6, then $4 + 4$ equals 8.

Constructing a Prompt



Chain of Thought

CoT prompting is a recent trend which encourages the LLMs to develop reasoning skills and breaks down the complex tasks into simple steps



Farmer John had 93 chickens. If he sold 20 to Farmer Bill and bought twice that number more, how many chickens does Farmer John have now?



Farmer John initially had 93 chickens. He sold 20 chickens to Farmer Bill. After this transaction, he had $93 - 20 = 73$ chickens left.



Then, Farmer John bought twice the number he sold to Farmer Bill, which is $2 * 20 = 40$ chickens.

So, Farmer John now has a total of 73 (remaining chickens) + 40 (newly bought chickens) = 113 chickens.



"Identify the main theme of the given text."

"Provide three supporting arguments that highlight this theme."

"Summarize the text in a single sentence."

Example Text:

"The advancement of technology has revolutionized various industries, leading to increased efficiency and productivity. It has transformed the way we communicate, work, and access information."



Main Theme: "The transformative impact of technology on industries and society."

Supporting Arguments:

1. Increased efficiency and productivity in various industries.
2. Transformation of communication methods and work processes.
3. Changes in information access and dissemination.

Summary: "The text highlights how technological advancements have brought about significant transformations in industries, communication, work, and information access, leading to increased efficiency and productivity."

Self Consistency

Advanced prompting which improves the CoT by providing diverse samples (few shot prompting)



When I was 6 my sister was half my age. Now I'm 70 how old is my sister?



When you were 6 years old, your sister was half your age, which means she was 3 years younger than you ($6 / 2 = 3$).



Now that you are 70 years old, you can calculate your sister's current age by adding those 3 years to your current age:

70 (your current age) + 3 (the age difference) = 73

So, your sister is currently **73 years old.**

 Q: There are 15 trees in the grove. Grove workers will plant trees in the grove today. After they are done, there will be 21 trees. How many trees did the grove workers plant today?
A: We start with 15 trees. Later we have 21 trees. The difference must be the number of trees they planted. So, they must have planted $21 - 15 = 6$ trees.
The answer is 6.

Q: If there are 3 cars in the parking lot and 2 more cars arrive, how many cars are in the parking lot?
A: There are 3 cars in the parking lot already. 2 more arrive. Now there are $3 + 2 = 5$ cars.
The answer is 5.

Q: Leah had 32 chocolates and her sister had 42. If they ate 35, how many pieces do they have left in total?
A: Leah had 32 chocolates and Leah's sister had 42. That means there were originally $32 + 42 = 74$ chocolates. 35 have been eaten. So in total they still have $74 - 35 = 39$ chocolates.
The answer is 39.

Q: Jason had 20 lollipops. He gave Denny some lollipops. Now Jason has 12 lollipops. How many lollipops did Jason give to Denny?
A: Jason had 20 lollipops. Since he only has 12 now, he must have given the rest to Denny. The number of lollipops he has given to Denny must have been $20 - 12 = 8$ lollipops.
The answer is 8.

Q: Shawn has five toys. For Christmas, he got two toys each from his mom and dad. How many toys does he have now?
A: He has 5 toys. He got 2 from mom, so after that he has $5 + 2 = 7$ toys. Then he got 2 more from dad, so in total he has $7 + 2 = 9$ toys.
The answer is 9.

Q: There were nine computers in the server room. Five more computers were installed each day, from monday to thursday. How many computers are now in the server room?
A: There are 4 days from monday to thursday. 5 computers were added each day. That means in total $4 * 5 = 20$ computers were added. There were 9 computers in the beginning, so now there are $9 + 20 = 29$ computers.
The answer is 29.

Q: Michael had 58 golf balls. On tuesday, he lost 23 golf balls. On wednesday, he lost 2 more. How many golf balls did he have at the end of wednesday?
A: Michael initially had 58 balls. He lost 23 on Tuesday, so after that he has $58 - 23 = 35$ balls. On Wednesday he lost 2 more so now he has $35 - 2 = 33$ balls.
The answer is 33.

Q: Olivia has \$23. She bought five bagels for \$3 each. How much money does she have left?
A: She bought 5 bagels for \$3 each. This means she spent $5 * 3 = \$15$. Olivia started with \$23, so she has $23 - 15 = \$8$ left.
The answer is \$8.

Q: When I was 6 my sister was half my age. Now I'm 70 how old is my sister?
A:

 When you were 6 years old, your sister was half your age, which means she was 3 years younger than you.
Now that you are 70 years old, your sister is still 3 years younger than you, so she is:
 $70 - 3 = 67$ years old now.
Therefore, your sister is currently 67 years old.

Tree of Thoughts

A recently proposed framework that allows the language model to self-evaluate the progress made by intermediate thoughts during a reasoning process (Breadth-first search)



Imagine three different experts are answering this question. All experts will write down 2 step of their thinking, then share it with the group. Then all experts will go on to the next step, etc. If any expert realises they're wrong at any point then they leave.

The question is : There are 15 trees in the grove. Grove workers will plant trees in the grove today. After they are done, there will be 21 trees. How many trees did the grove workers plant today?



Sure, let's go through the thought process of three different experts:

Expert 1:

Step 1: Start with the initial number of trees in the grove, which is 15.

Step 2: Subtract the initial number of trees from the final number of trees to find out how many trees the workers planted today. $21 - 15 = 6$ trees.

Expert 2:

Step 1: Start with the final number of trees in the grove, which is 21.

Step 2: Subtract the initial number of trees from the final number of trees to find out how many trees the workers planted today. $21 - 15 = 6$ trees.

Expert 3:

Step 1: Start with the final number of trees in the grove, which is 21.

Step 2: Subtract the final number of trees from the initial number of trees to find out how many trees the workers planted today. $15 - 21 = -6$ trees. (Note: Expert 3 has made an error here, as you can't have a negative number of trees planted.)

So, Expert 1 and Expert 2 have provided the correct answer: the grove workers planted 6 trees today. Expert 3 made an error in the second step of their thinking by subtracting the final number from the initial number instead of the other way around.

Tools for Prompting

Tools and Framework help you to design better
prompts!!

Description

This is where you state the objective of the final prompt. Your objective is to...

Create a detailed prompt to come up with a three-month content planner for a Software Engineer

Test cases

Add test cases to test the generated prompts. The prompts will be rated based on how well it performs on these test cases.

[+ Add test case](#)[★ Generate additional test cases](#)

SCENARIO

e.g. A new fitness app called StayFit

EXPECTED OUTPUT ⓘ

e.g. A new fitness app called StayFit

[★ Generate expected output](#)[✍ Run +60 battles](#)

60

[+ Add new](#)[★ Generate prompts](#)[✖ Clear](#)

Prompt #1

[🏆 100](#)

Imagine you are a Software Engineer with a passion for creating valuable content. Your goal is to come up with a three-month content planner that will engage and educate your audience. Your prompt should inspire you to review various topics, perform in-depth research, and create compelling content that showcases your expertise. Get ready to embark on a creative journey that will captivate your audience and establish you as a thought leader in the software engineering field.

Prompt #2

[🏆 100](#)

You are a Software Engineer tasked with creating a three-month content planner. Your goal is to review various topics and perform in-depth research to develop a comprehensive plan. Consider different aspects such as industry trends, emerging technologies, and career advancement opportunities. Customize the planner based on your specific interests and goals as a Software Engineer. Remember to prioritize creating engaging and informative content that will benefit your target audience. Let your creativity shine as you curate a three-month content planner that is both exciting and valuable. Happy planning!

openAI Playground



The OpenAI Playground interface features a vibrant, abstract background with overlapping colored shapes in shades of orange, yellow, green, and purple.

Header:

- Logo: A stylized yellow and orange logo resembling a flame or a series of connected lines.
- Navigation links: Overview, Documentation, API reference, Examples, Playground.
- User profile: Personal (with a user icon).
- Buttons: Upgrade, Forum, Help, Personal.

Playground Section:

SYSTEM: You are a helpful assistant.

USER: Enter a user message here.

Controls:

- Add message button.
- Mode dropdown: Chat (selected), Complete (Legacy), Edit (Legacy).
- Maximum length: 256 (slider).
- Stop sequences: Enter sequence and press Tab (input field).
- Top P: 1 (slider).
- Frequency penalty: 0 (slider).
- Presence penalty: 0 (slider).

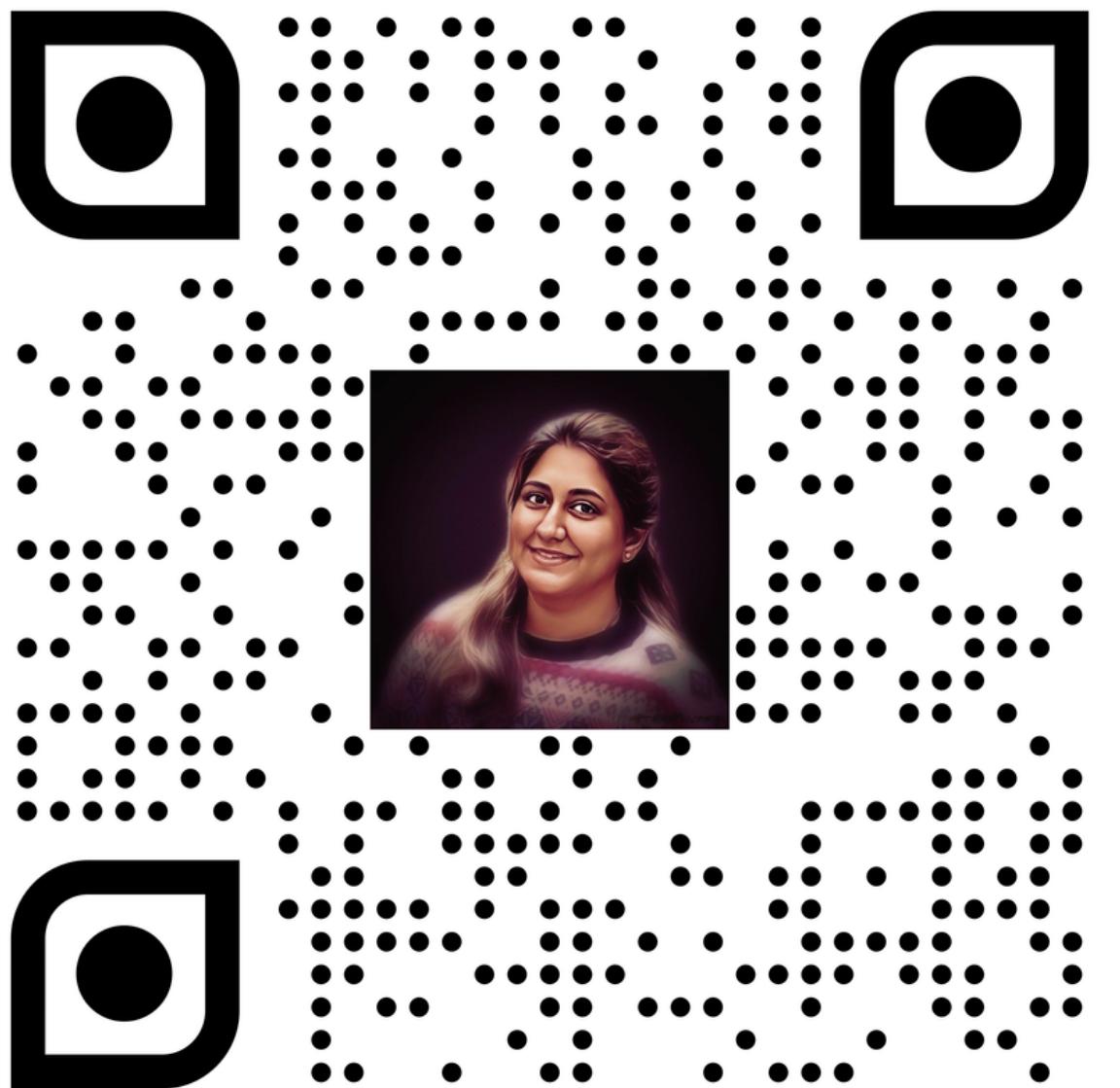
Bottom Buttons:

- Submit button.
- Reset button.

Best Practices

- Be Clear, Specific, and Talk
- Structure the Prompts, include Examples
- Include constraints (Ex: Word Count)
- Avoid information overload and open-ended questions
- Define the Output Style
- Test with different prompt designs and evaluate the responses

Thank you!!



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