

The Art of Using LLMs for English Learning

Agenda

What is ChatGPT?

Generative Pretrained Transformer (GPT)

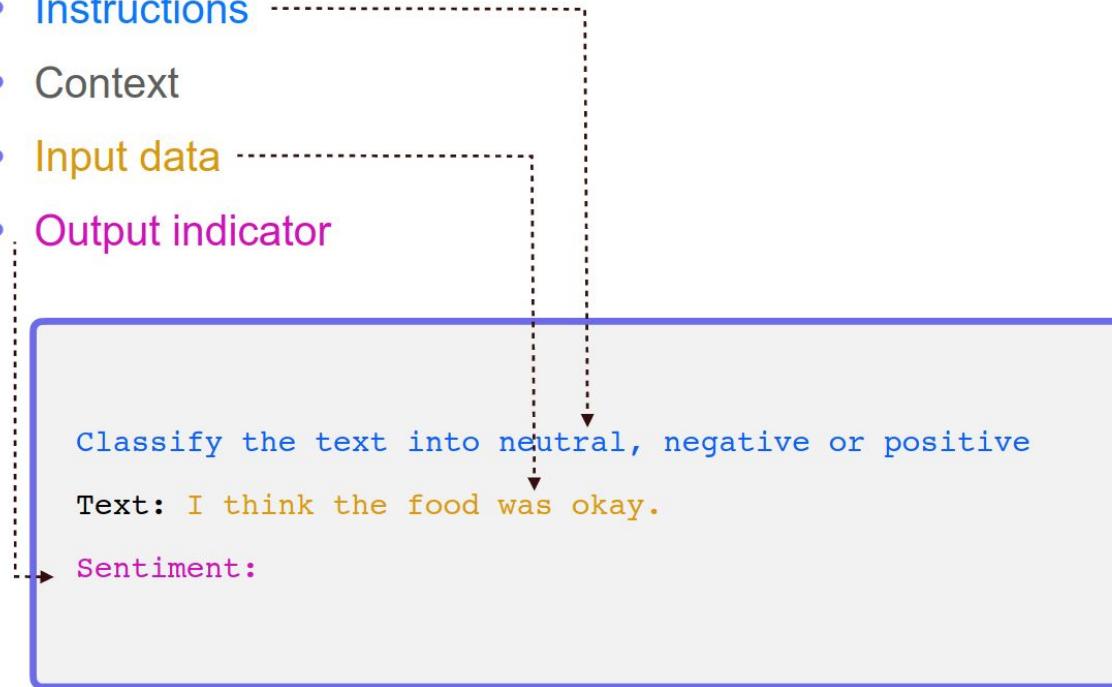
ChatGPT.COM

What are prompts?

Instructions and context passed to a language model to achieve a desired task

Elements of a Prompt

- A prompt is composed with the following components:
 - Instructions
 - Context
 - Input data
 - Output indicator



Remember Two Important Things:

1. The quality of responses depends on your questions. If unsatisfied, try rephrasing your question!
2. You can ask ChatGPT to rewrite text at a specific English proficiency level, such as:
 - a. “can you simplify”
 - b. “can you rewrite this text for an A2 level”
 - c. “rewrite using C2 vocabulary” etc.

Using ChatGPT to Practice Conversation

- Practice Small Talk & Daily Conversations
- Prepare for Job Interviews
- Find Unlimited Conversation Topics
- Accessible Practice Tool
- Write & Learn from Conversations
- Engage in Written Conversations

Using ChatGPT to Practice Conversation

Can we have a conversation about [topic]?



Can we have a conversation about movies?



Sure! What would you like to talk about?



Ask me questions and I will respond



What's your favorite movie genre?



I like science fiction



What's your favorite science fiction movie?



E.T.



That's a classic! What do you like about E.T.?

Using ChatGPT to Practice Conversation

Ask Chat GPT to correct your mistakes in English.

Let's have a conversation and you will correct my mistakes

Of course! I'll do my best to help you improve your language skills. What would you like to talk about? Like Dislike

let's talk about books

Sure, what kind of books are you interested in? Like Dislike

I likes fiction

Great! "Likes" should be "like." Fiction is a broad genre that includes many different types of stories, such as science fiction, fantasy, and historical fiction. Do you have a specific subgenre of fiction that you enjoy reading? Like Dislike

Using ChatGPT to Practice Conversation

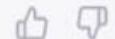
Ask for clarification to learn more about the correction:



why did you say that likes should be like?



I apologize if my previous response was unclear. "Likes" is the third-person present form of the verb "to like," while "like" is the base form of the verb. In this context, it should be "I like fiction" instead of "I likes fiction" as it is in the first person singular and it is not conjugated correctly.



You can also ask it to suggest certain vocabulary to use in this conversation:



can you suggest phrasal verbs I can use in this conversation?



Certainly! Here are a few phrasal verbs that you could use in this conversation:

- "bring up" (to mention something)
- "get into" (to start enjoying or being interested in something)
- "look into" (to investigate or research)
- "pick up" (to start reading or learning something)
- "speak up" (to speak louder or more clearly)
- "think about" (to consider or ponder something)

You can use these verbs in a sentence like "I am thinking about getting into fantasy novels" or "I will look into some fantasy novels you suggested"

Please let me know if you have any question about usage or meaning of any of them.

Prompts for practicing conversations:

- Let's have a conversation about [topic]
- Let's have a conversation about [topic] and **correct my mistakes**
- Let's have a conversation about [topic] and suggest different **vocabulary**
- Let's have a conversation about [topic] and suggest **phrasal verbs** I can use
- Let's **conduct a mock job interview** where you will be asking me questions as if I were interviewing for a [position].

Use ChatGPT to Prepare For a Job Interview

Let's conduct a mock job interview where you will be asking my questions as if I were interviewing for a [job role]. Please provide feedback on my answers.



Let's conduct a mock job interview where you will be asking me questions as if I were interviewing for a marketing manager role. Please provide feedback on my answers.



Sure, I'd be happy to conduct a mock job interview with you for the role of marketing manager. Please keep in mind that as a language model, my feedback will be based on the information I've been trained on, but I will do my best to provide you with helpful and constructive feedback.

Please go ahead and answer the questions as if you were in a real job interview and I'll provide feedback on your answers.



Ok



Great, let's begin the interview. Can you please tell me about your experience in marketing? How have you contributed to the growth of a company in the past?



I was a really good marketing manager.



I see, Can you please provide some specific examples of your contributions to a company's growth in the past? How have you increased sales or brand awareness? Can you walk me through a campaign or project you have managed and the results you achieved? Can you also tell me about any challenges you faced and how you overcame them?

Write a chat between a teacher and the mother of a student who is having a hard time in school



Write a chat between a teacher and a mother of a student who is having a hard time in school



Teacher: Hello, how can I help you today?



Mother: Hi, I'm the mother of one of your students, John. He's been having a hard time in school lately and I wanted to talk to you about it.

Teacher: Oh, I'm sorry to hear that. Can you tell me more about what's been going on?

Mother: Well, John has been struggling with his grades and he's been having a hard time staying focused in class. I'm worried that he's falling behind and I want to do everything I can to help him.

Teacher: I understand your concern. Let me pull up John's file and take a look at his grades. Can you tell me more about what's been going on at home? Is there anything that might be affecting his performance in school?

Can you suggest useful vocabulary to use in such conversations?



can you suggest useful vocabulary to use in such conversation?



Sure, here are some vocabulary words and phrases that might be useful in a conversation between a teacher and a parent of a student who is having a hard time in school: like dislike

- Struggling (adjective): having difficulty with something.
- Grades (noun): marks or scores that a student receives for their work.
- Focused (adjective): paying attention to something and not being distracted.
- Falling behind (phrase): making less progress than others in the same situation.
- Concern (noun): a feeling of worry or unease about something.
- File (noun): a collection of records or documents.
- Performance (noun): how well someone does a task or activity.
- Separated (verb): no longer living together as a couple.
- Hard (adjective): difficult or challenging.
- Support (verb): help someone by providing them with what they need.
- Succeed (verb): achieve a desired result or outcome.

Ask for feedback on your grammar:



Correct my grammar in the following text:

yesterday I had gone to my friend's house in Washington st



Yesterday, I went to my friend's house on Washington Street.



can you explain your correction?



Sure, In the text you provided, I corrected the verb tense.



- The original text used the past perfect tense "had gone" which is used to indicate an action that was completed before another action in the past.
- However, in this case, the action of going to a friend's house is a simple past action and doesn't need the past perfect. So I corrected it to the past simple tense "went" which is used to indicate an action that happened at a specific time in the past.

I also corrected the capitalization of "Washington st" to "Washington Street" to make it grammatically correct, street names are capitalized in English.

Using ChatGPT to Improve Your Pronunciation



Make a list of 10 common words with the TH sound



1. That
2. This
3. Then
4. Think
5. Thank
6. Thing
7. Through
8. Throw
9. They
10. The

Using ChatGPT to Improve Your Writing

Advanced Ways to Phrase the Question

1. Original Question:

- "Can you review and debug the following code?"

2. Advanced Phrasing:

- "Could you meticulously scrutinize and rectify any potential issues in the provided code?"
- "Would you be able to perform an in-depth analysis and debugging of the ensuing script?"

Debugging the Error

The error occurs because `question_data['answer']` should be an integer indicating the correct option, but it is being treated as a string. Ensure that the `user_answer` is correctly stored and used in the `calculate_score` method. By correcting this type discrepancy and refining the error handling, the script should run without raising a `TypeError`.



Message ChatGPT



Using ChatGPT as Your Writing Assistant



Can you write an email to a client requesting them to reschedule a meeting? Make it friendly but polite.



Subject: Request to Reschedule Meeting

Dear [Client's Name],

I hope this email finds you well. I am writing to request your assistance in rescheduling our upcoming meeting. Due to [reason for rescheduling], I will not be able to make the previously scheduled time. I apologize for any inconvenience this may cause and understand that your time is valuable.

I would like to suggest the following new date and time for our meeting: [New date and time]. Please let me know if this works for you or if you have any other availability. I am happy to work around your schedule to find a convenient time for both of us.

Once again, I apologize for any inconvenience this may cause and I appreciate your understanding. I look forward to our meeting and discussing [topic of meeting].

Please let me know your availability and we will confirm the new meeting date and time.

Best,

[Your Name]

Using ChatGPT as Your Writing Assistant

 Can you make it more informal?

 Subject: Rescheduling our Meeting

Hey [Client's Name],

Hope all is well with you. I wanted to reach out because something came up and I need to reschedule our upcoming meeting. My apologies for any inconvenience this may cause.

I was thinking we could schedule the meeting for [New date and time]. Does this work for you or is there another time that would be better? I'm totally flexible and happy to work around your schedule.

Let me know what works for you and we'll make it happen.

Thanks for your understanding,
[Your Name]

Generate Output in a Specific Format

Prompt: What are the distinct branches that constitute a law major?

Gemini.google.com

G Gemini was just updated. See update

What are the distinct branches that constitute a law major?

Show drafts ▾

There isn't a typical breakdown of law majors into distinct branches during undergraduate studies. Law itself is usually treated as a single major with a focus on core legal principles and foundational knowledge. However, there are two main **divisions** within law that provide a framework for understanding different legal areas:

- Public Law:** This branch deals with the relationship between the government and its citizens, focusing on how power is distributed and exercised. Public law often involves entities like the state, government agencies, and individuals. Some key sub-fields within public law include:
 - Constitutional Law
 - Administrative Law
 - Criminal Law
- Private Law:** This branch governs relationships between individuals and private entities. It focuses on resolving disputes, enforcing rights and obligations, and ensuring fair dealings between private parties. Some important sub-fields of private law include:
 - Civil Law (contracts, torts, property)
 - Business Law (corporations, securities, commercial transactions)
 - Intellectual Property Law (patents, copyrights, trademarks)

Additional Considerations:

- Procedural Law:** This is a separate category that deals with the legal rules and processes used in courts, regardless of the specific area of law being addressed (public or private). Examples include evidence, civil procedure, and criminal

Enter a prompt here

G Gemini may display inaccurate info, including about people, so double-check its responses. [Your privacy & Gemini Apps](#)

Generate Output in a Specific Format

Prompt: What are the distinct branches that constitute a law major?

What are the distinct branches that constitute a law major?

Hide drafts ⌂ 🔍

Draft 1
There isn't a typical breakdown of law majors into distinct branches during undergraduate studies.

Draft 2
There isn't a traditional breakdown of law majors into distinct branches at the undergraduate level.

Draft 3
Law itself isn't divided into distinct branches at the undergraduate level. There's a core curriculum.

There isn't a typical breakdown of law majors into distinct branches during undergraduate studies. Law itself is usually treated as a single major with a focus on core legal principles and foundational knowledge. However, there are two main **divisions** within law that provide a framework for understanding different legal areas:

1. **Public Law:** This branch deals with the relationship between the government and its citizens, focusing on how power is distributed and exercised. Public law often involves entities like the state, government agencies, and individuals. Some key sub-fields within public law include:

- Constitutional Law
- Administrative Law
- Criminal Law

2. **Private Law:** This branch governs relationships between individuals and private entities. It focuses on resolving disputes, enforcing rights and obligations, and ensuring fair dealings between private parties. Some important sub-fields of private law include:

- Civil Law (contracts, torts, property)
- Business Law (corporations, securities, commercial transactions)
- Intellectual Property Law (patents, copyrights, trademarks)

Enter a prompt here

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Generate Output in a Specific Format

Prompt: Generate a table containing your previous answer's information

H Generate a table containing your previous answer's information

Show drafts ▾

Branches of Law

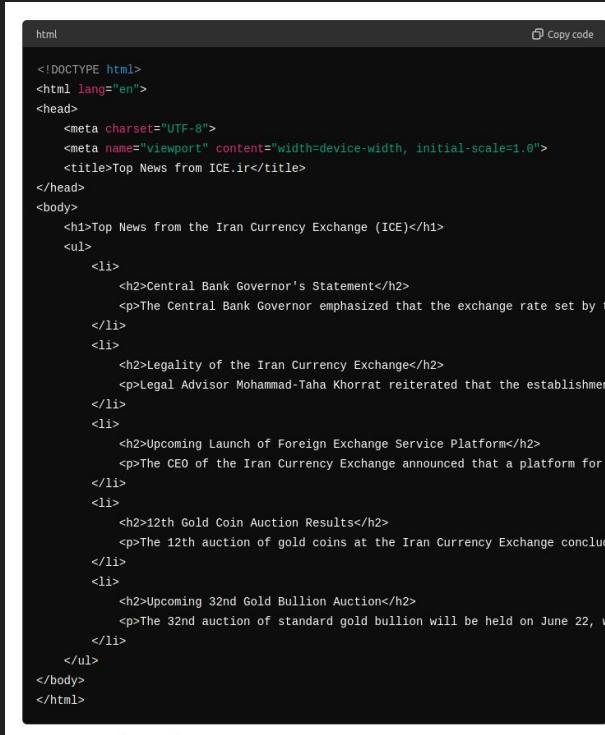
Division	Description	Sub-fields (Examples)
Public Law	Governs the relationship between the government and its citizens	* Constitutional Law * Administrative Law * Criminal Law
Private Law	Governs relationships between individuals and private entities	* Civil Law (contracts, torts, property) * Business Law (corporations, securities, commercial transactions) * Intellectual Property Law (patents, copyrights, trademarks)
Separate Category		
Procedural Law	Deals with legal rules and processes used in courts	* Evidence * Civil Procedure * Criminal Procedure
Specializations	Not strictly branches, but focused areas of practice	* Environmental Law * Family Law * Health Law * Tax Law * Many more

Export to Sheets

Enter a prompt here

Gemini may display inaccurate info, including about people, so double-check its responses. [Your privacy & Gemini Apps](#)

Extract Data From A Web Page



```
html
<!DOCTYPE html>
<html lang="en">
<head>
    <meta charset="UTF-8">
    <meta name="viewport" content="width=device-width, initial-scale=1.0">
    <title>Top News from ICE.ir</title>
</head>
<body>
    <h1>Top News from the Iran Currency Exchange (ICE)</h1>
    <ul>
        <li>
            <h2>Central Bank Governor's Statement</h2>
            <p>The Central Bank Governor emphasized that the exchange rate set by t</p>
        </li>
        <li>
            <h2>Legality of the Iran Currency Exchange</h2>
            <p>Legal Advisor Mohammad-Taha Khorrat reiterated that the establishmen</p>
        </li>
        <li>
            <h2>Upcoming Launch of Foreign Exchange Service Platform</h2>
            <p>The CEO of the Iran Currency Exchange announced that a platform for</p>
        </li>
        <li>
            <h2>i2th Gold Coin Auction Results</h2>
            <p>The 12th auction of gold coins at the Iran Currency Exchange conclude</p>
        </li>
        <li>
            <h2>Upcoming 32nd Gold Bullion Auction</h2>
            <p>The 32nd auction of standard gold bullion will be held on June 22, w</p>
        </li>
    </ul>
</body>
</html>
```

Searched 1 site

Top News from Iran Currency Exchange (ICE) Website:

- Central Bank's Stance on Dollar Rates:** The Central Bank Governor asserts that the exchange rates from the Iran Currency Exchange should be the benchmark for the national dollar rate, emphasizing regulatory and market management roles.
- Legitimacy of ICE:** The Legal Director of ICE affirms the center's establishment is entirely legal, highlighting the Central Bank's exclusive role in managing the country's currency and gold markets.
- New Currency Trading Platform:** The CEO of ICE announces the upcoming launch of a service currency trading system within the next few months.
- Gold Coin Auction Results:** In the 12th auction, approximately 31,000 gold coins were allocated, including various denominations.

Highlighted Phrases:

- "exchange rates from the Iran Currency Exchange should be the benchmark"
- "entirely legal"
- "exclusive role in managing the country's currency and gold markets"
- "upcoming launch"
- "31,000 gold coins were allocated"

For further details, you can visit the [ICE website](https://ice.ir/).

Read the following link and extract top news:
<https://ice.ir/>

highlight the important phrases.

Extract Data From A Web Page

Searched 1 site

Here are the top news from the "مرکز مبادله ارز و طلای ایران" (ICE) website, presented in JSON format:

```
json
{
  "news": [
    {
      "title": "نیخ دلار مرکز مبادله ایران باید مبنای نیخ دلار در کشور باشد",
      "summary": "مرکز مبادله ایران باید به عنوان مبنای نیخ دلار در سراسر کشور باشد"
    },
    {
      "title": "تاسیس مرکز مبادله ارز و طلای ایران کاملاً قایقونی است",
      "summary": "مرکز را به عنوان متولی احصاری مدیریت بزار ارز و طلا معرفی کرد"
    },
    {
      "title": "سامانه معاملات ارز خدماتی تا ماههای آینده راه اندازی می شود",
      "summary": "در که سامانه معاملات ارز خدماتی تا ماههای آینده راه اندازی خواهد شد"
    },
    {
      "title": "تخصیص حدود 31 هزار قطعه سکه در دوازدهمین جراج مرکز مبادله ایران",
      "summary": "سکه، 11 هزار و 845 قطعه تمام سکه و 4194 قطعه نیم سکه تخصیص یافت"
    },
    {
      "title": "برگزار خواهد شد و منفاصیان میتوانند با واریز وجه الهمان شرکت کنند",
      "summary": "برگزار خواهد شد و منفاصیان میتوانند با واریز وجه الهمان شرکت کنند"
    }
  ]
}
```

Read the following link and extract top news:
<https://ice.ir/>

highlight the important phrases.

< 15/15 >



Searched 1 site

Top News from Iran Currency Exchange (ICE) Website:

- Central Bank's Stance on Dollar Rates:** The Central Bank Governor asserts that the exchange rates from the Iran Currency Exchange should be the benchmark for the national dollar rate, emphasizing regulatory and market management roles.
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For further details, you can visit the [ICE website](https://ice.ir/).

Designing Prompts for Different Tasks

- In the next few slides, we will cover a few examples of common tasks using different prompts
- Tasks covered:
 - Text Summarization
 - Question Answering
 - Text Classification
 - Role Playing
 - Code Generation
 - Reasoning

Text Summarization

Context

Antibiotics are a type of medication used to treat bacterial infections. They work by either killing the bacteria or preventing them from reproducing, allowing the body's immune system to fight off the infection.

- > Antibiotics are usually taken orally in the form of pills, capsules, or liquid solutions, or sometimes administered intravenously. They are not effective against viral infections, and using them inappropriately can lead to antibiotic resistance.
- > Explain the above in one sentence:

Instruction

Antibiotics are medications used to treat bacterial infections by either killing the bacteria or stopping them from reproducing, but they are not effective against viruses and overuse can lead to antibiotic resistance.

Question Answering

Answer the question based on the context below. Keep the answer short and concise. Respond "Unsure about answer" if not sure about the answer.

Context: Teplizumab traces its roots to a New Jersey drug company called Ortho Pharmaceutical. There, scientists generated an early version of the antibody, dubbed OKT3. Originally sourced from mice, the molecule was able to bind to the surface of T cells and limit their cell-killing potential. In 1986, it was approved to help prevent organ rejection after kidney transplants, making it the first therapeutic antibody allowed for human use.

Question: What was OKT3 originally sourced from?

Answer: Mice.

Text Classification

Classify the text into neutral, negative or positive.

Text: I think the food was okay.

Sentiment: Neutral

Role Playing

The following is a conversation with an AI research assistant. The assistant tone is technical and scientific.

Human: Hello, who are you?

AI: Greeting! I am an AI research assistant. How can I help you today?

Human: Can you tell me about the creation of blackholes?

AI: Sure! Black holes are regions of spacetime where the gravitational force is so strong that nothing, not even light, can escape from it. They are created when a very massive star dies and its core collapses in on itself, forming a singularity of infinite density. The intense gravity of the singularity pulls in all the matter and radiation around it, creating the black hole.

Code Generation

```
"""
Table departments, columns = [DepartmentId,
DepartmentName]
Table students, columns = [DepartmentId, StudentId,
StudentName]
Create a MySQL query for all students in the Computer
Science Department
"""

SELECT StudentId, StudentName
FROM students
WHERE DepartmentId IN (SELECT DepartmentId FROM
departments WHERE DepartmentName = 'Computer Science');
```

Reasoning

The odd numbers in this group add up to an even number: 15, 32, 5, 13, 82, 7, 1.

Solve by breaking the problem into steps. First, identify the odd numbers, add them, and indicate whether the result is odd or even.

Odd numbers: 15, 5, 13, 7, 1

Sum: 41

41 is an odd number.

Prompt Engineering Techniques

- Many advanced prompting techniques have been designed to improve performance on complex tasks
 - Few-shot prompts
 - Chain-of-thought (CoT) prompting
 - Self-Consistency
 - Knowledge Generation Prompting
 - ReAct

Few-shot Prompts

- Few-shot prompting allows us to provide **exemplars** in prompts to steer the model towards better performance

The odd numbers in this group add up to an even number: 4,
8, 9, 15, 12, 2, 1.
A: The answer is False.

The odd numbers in this group add up to an even number: 17,
10, 19, 4, 8, 12, 24.
A: The answer is True.

The odd numbers in this group add up to an even number: 16,
11, 14, 4, 8, 13, 24.
A: The answer is True.

The odd numbers in this group add up to an even number: 17,
9, 10, 12, 13, 4, 2.
A: The answer is False.

The odd numbers in this group add up to an even number: 15,
32, 5, 13, 82, 7, 1.
A: The answer is True.

Chain-of-Thought (CoT) Prompting

- Prompting can be further improved by instructing the model to reason about the task when responding
 - This is very useful for tasks that requiring reasoning
 - You can combine it with few-shot prompting to get better results
 - You can also do zero-shot CoT where exemplars are not available

The odd numbers in this group add up to an even number: 4, 8, 9, 15, 12, 2, 1.

A: Adding all the odd numbers (9, 15, 1) gives 25. The answer is False.

The odd numbers in this group add up to an even number: 15, 32, 5, 13, 82, 7, 1.

A: Adding all the odd numbers (15, 5, 13, 7, 1) gives 41. The answer is False.

Zero-Shot CoT

- Involves adding "Let's think step by step" to the original prompt

I went to the market and bought 10 apples. I gave 2 apples to the neighbor and 2 to the repairman. I then went and bought 5 more apples and ate 1. How many apples did I remain with?

11 apples

I went to the market and bought 10 apples. I gave 2 apples to the neighbor and 2 to the repairman. I then went and bought 5 more apples and ate 1. How many apples did I remain with?

→ Let's think step by step.

First, you started with 10 apples.

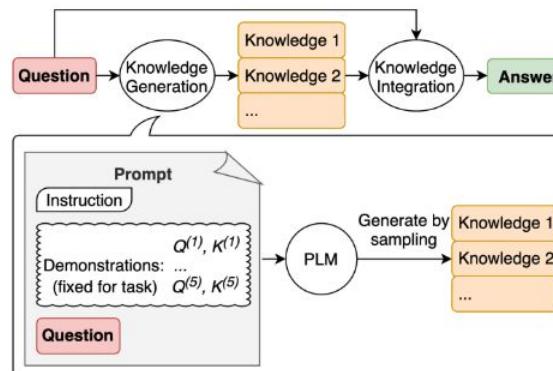
You gave away 2 apples to the neighbor and 2 to the repairman, so you had 6 apples left.

Then you bought 5 more apples, so now you had 11 apples.

Finally, you ate 1 apple, so you would remain with 10 apples.

Generate Knowledge Prompting

- This technique involves using additional knowledge provided as part of the context to improve results on complex tasks such as commonsense reasoning
- The knowledge used in the context is generated by a model and used in the prompt to make a prediction
 - Highest-confidence prediction is used



Generate Knowledge Prompting Example

- The first step is to generate knowledge. Below is an example of how to generate the knowledge samples

Input: Greece is larger than mexico.

Knowledge: Greece is approximately 131,957 sq km, while Mexico is approximately 1,964,375 sq km, making Mexico 1,389% larger than Greece.

...

Input: A rock is the same size as a pebble.

Knowledge: A pebble is a clast of rock with a particle size of 4 to 64 millimetres based on the Udden-Wentworth scale of sedimentology. Pebbles are generally considered larger than granules (2 to 4 millimetres diameter) and smaller than cobbles (64 to 256 millimetres diameter).

Input: Part of golf is trying to get a higher point total than others.

Knowledge:

The objective of golf is to play a set of holes in the least number of strokes. A round of golf typically consists of 18 holes. Each hole is played once in the round on a standard golf course. Each stroke is counted as one point, and the total number of strokes is used to determine the winner of the game.

Knowledge 1

Golf is a precision club-and-ball sport in which competing players (or golfers) use many types of clubs to hit balls into a series of holes on a course using the fewest number of strokes. The goal is to complete the course with the lowest score, which is calculated by adding up the total number of strokes taken on each hole. The player with the lowest score wins the game.

Knowledge 2

Generate Knowledge Prompting Example

- The knowledge samples are then used to generate **knowledge augmented questions** to get answer proposals
 - The highest-confidence response is selected as final answer

Question: Part of golf is trying to get a higher point total than others.
Yes or No?

Knowledge: The objective of golf is...

Explain and Answer: No, the objective of golf is not to get a higher point total than others. Rather, the objective is to play a set of holes in the least number of strokes. The total number of strokes is used to determine the winner of the game, not the total number of points.

High-confidence prediction

Question: Part of golf is trying to get a higher point total than others.
Yes or No?

Knowledge: Golf is a precision club-and-ball sport in which competing players (or golfers) use many types of clubs to hit balls into...

Explain and Answer: Yes, part of golf is trying to get a higher point total than others. Each player tries to complete the course with the lowest score, which is calculated by adding up the total number of strokes taken on each hole. The player with the lowest score wins the game.

Low-confidence prediction

Program-aided Language Model (PAL)

- Chain-of-thought prompting is a good example of how to steer models to perform better at complex reasoning tasks
 - However, sometimes CoT is not enough as it depends only on the generated text from the model
- Program-aided language models (PAL) uses an LLM to read problems and generate programs as the intermediate reasoning steps
 - It offloads the solution step to a runtime such as Python interpreter

PAL

Chain-of-Thought (Wei et al., 2022)

Input

Q: Roger has 5 tennis balls. He buys 2 more cans of tennis balls. Each can has 3 tennis balls. How many tennis balls does he have now?

A: Roger started with 5 tennis balls. 2 cans of 3 tennis balls each is 6 tennis balls. $5 + 6 = 11$. The answer is 11.

Q: The bakers at the Beverly Hills Bakery baked 200 loaves of bread on Monday morning. They sold 93 loaves in the morning and 39 loaves in the afternoon. A grocery store returned 6 unsold loaves. How many loaves of bread did they have left?

Model Output

A: The bakers started with 200 loaves. They sold 93 in the morning and 39 in the afternoon. So they sold $93 + 39 = 132$ loaves. The grocery store returned 6 loaves. So they had $200 - 132 - 6 = 62$ loaves left.

The answer is 62.



Program-aided Language models (this work)

Input

Q: Roger has 5 tennis balls. He buys 2 more cans of tennis balls. Each can has 3 tennis balls. How many tennis balls does he have now?

A: Roger started with 5 tennis balls.

`tennis_balls = 5`

`2 cans of 3 tennis balls each is`

`bought_balls = 2 * 3`

`tennis_balls`. The answer is

`answer = tennis_balls + bought_balls`

Q: The bakers at the Beverly Hills Bakery baked 200 loaves of bread on Monday morning. They sold 93 loaves in the morning and 39 loaves in the afternoon. A grocery store returned 6 unsold loaves. How many loaves of bread did they have left?

Model Output

A: The bakers started with 200 loaves

`loaves_baked = 200`

`They sold 93 in the morning and 39 in the afternoon`

`loaves_sold_morning = 93`

`loaves_sold_afternoon = 39`

`The grocery store returned 6 loaves.`

`loaves_returned = 6`

The answer is

`answer = loaves_baked - loaves_sold_morning
- loaves_sold_afternoon + loaves_returned`

`>>> print(answer)`

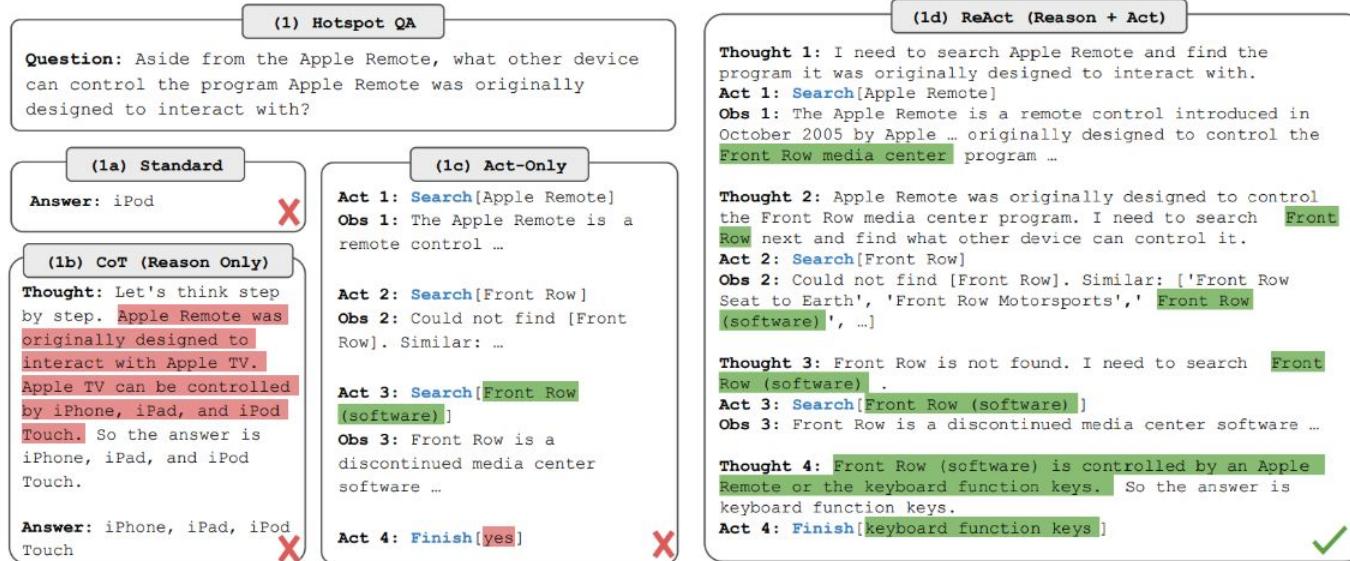
74



ReAct

- ReAct is a framework where LLMs are used to generate both reasoning traces and task-specific actions in an interleaved manner
 - **Generating reasoning traces** allow the model to induce, track, and update action plans, and even handle exceptions
 - **The action step** allows to interface with and gather information from external sources such as knowledge bases or environments.
- ReAct allows LLMs to interact with external tools to retrieve additional information that leads to more reliable and factual responses

ReAct



Source: *ReAct: Synergizing Reasoning and Acting in Language Models*

Prompt Engineering

Introduction

LLM Settings

Basics of Prompting

Prompt Elements

General Tips for Designing
Prompts

Examples of Prompts

Techniques

Zero-shot Prompting

Few-shot Prompting

Chain-of-Thought Prompting

Self-Consistency

Generate Knowledge
Prompting

Prompt Chaining

Tree of Thoughts

Retrieval Augmented
Generation

Automatic Reasoning and
Tool-use

Automatic Prompt Engineer

Active-Prompt

Directional Stimulus

DynamicMn

Prompt Engineering

Prompt Engineering Guide

Prompt engineering is a relatively new discipline for developing and optimizing prompts to efficiently use language models (LMs) for a wide variety of applications and research topics. Prompt engineering skills help to better understand the capabilities and limitations of large language models (LLMs).

Researchers use prompt engineering to improve the capacity of LLMs on a wide range of common and complex tasks such as question answering and arithmetic reasoning. Developers use prompt engineering to design robust and effective prompting techniques that interface with LLMs and other tools.

Prompt engineering is not just about designing and developing prompts. It encompasses a wide range of skills and techniques that are useful for interacting and developing with LLMs. It's an important skill to interface, build with, and understand capabilities of LLMs. You can use prompt engineering to improve safety of LLMs and build new capabilities like augmenting LLMs with domain knowledge and external tools.

Motivated by the high interest in developing with LLMs, we have created this new prompt engineering guide that contains all the latest papers, advanced prompting techniques, learning guides, model-specific prompting guides, lectures, references, new LLM capabilities, and tools related to prompt engineering.

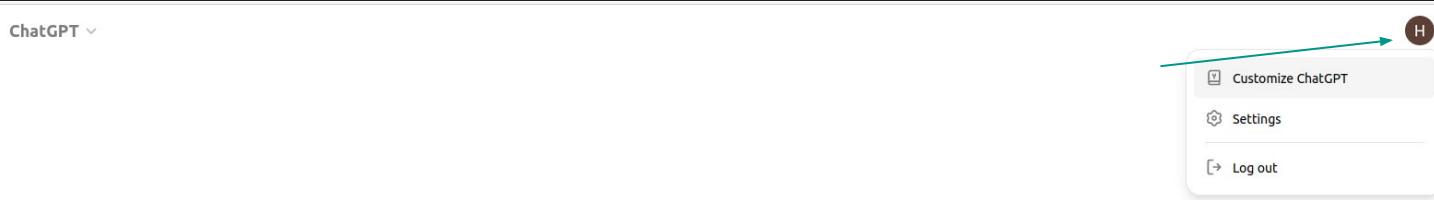
Want to learn more?



We've partnered with Maven to deliver the following live cohort-based courses on prompt engineering:

- [LLMs for Everyone \(Beginner\)](#) - learn about the latest prompt engineering techniques and how to effectively apply them to real-world use cases.
- [Prompt Engineering For LLMs \(Advanced\)](#) - learn advanced prompt engineering techniques to build complex use cases and applications with LLMs.

Define Instruction in ChatGPT



The image shows the ChatGPT web interface. At the top left is the "ChatGPT" logo with a dropdown arrow. On the top right is a user profile icon with a letter "H". A teal arrow points from the text "Define Instruction in ChatGPT" to this profile icon. A white dropdown menu is open next to the profile icon, containing three items: "Customize ChatGPT" (with a gear icon), "Settings" (with a gear icon), and "Log out" (with a log-out icon). Below the header is a large, stylized black knot icon. Underneath the knot are four rounded rectangular cards, each with an icon and text: "Create a workout plan" (gym icon), "What to do with kids' art" (paint palette icon), "Experience Seoul like a local" (city skyline icon), and "Quiz me on ancient civilizations" (scroll icon). At the bottom is a light gray footer bar with a "Message ChatGPT" button (containing a speech bubble icon) and an upward-pointing arrow icon. The footer also includes a small note: "ChatGPT can make mistakes. Check important info." and a help icon.

Define Instruction in ChatGPT

ChatGPT ▾

H

Customize ChatGPT

Custom Instructions ⓘ

What would you like ChatGPT to know about you to provide better responses?

0/1500

Hide tips ⓘ

How would you like ChatGPT to respond?

Refine the input text by incorporating idiomatic expressions and advanced grammatical structures.
Additionally, provide at least two advanced-level rewrites of the question, and then address the user's request within the text.

226/1500

Enable for new chats

Message ChatGPT

ChatGPT can make mistakes. Check important info.

?

Define Instruction in ChatGPT

ChatGPT ▾

H

Customize ChatGPT

Custom Instructions ⓘ

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226/1500

Hide tips ⓘ

Enable for new chats

Thought starters

- How formal or casual should ChatGPT be?
- How long or short should responses generally be?
- How do you want to be addressed?
- Should ChatGPT have opinions on topics or remain neutral?

Cancel **Save**

Message ChatGPT

ChatGPT can make mistakes. Check important info.

?

Risks using ChatGPT

- It's addictive and potentially distracting
- Inaccurate information
- Social engineering and bias
- Data sharing and privacy breaches
- Limited reasoning and understanding
- Lack of Critical Thinking

Play the conversation:

<https://naturalreaders.com/online/>

<https://voicemaker.in/>

Thank you for Your Patient

Follow me on Telegram

