

vmware® EXPLORE

Harnessing ChatGPT via API Interface.

By James Warmkessel



James Warmkessel

A seasoned Software Engineer with over 20 years of experience, has specialized in AI Development. Leveraging profound expertise, he has been instrumental in creating intelligent solutions for various industries. His innovative approach has led to advancements in machine learning, contributing significantly to the field.



Summary of this session

- Intro to ChatGPT - chat.openai.com
- Prompt - What are they and how to use them.
- Learn how to use the Rest API and Setup keys
- Examples of how to exercise the api
- Discuss of the ChatGPT Plugin

Ask me lots of questions

I'm here to help, ask me questions. If I don't know, we will ask the AI! Perhaps its has an answer.



vmware® EXPLORE

Let's Login to
chat.openai.com

You can create an
account or use one that
you already use

Create your account

Note that phone verification may be required for
signup. Your number will only be used to verify
your identity for security purposes.

Email address

Continue

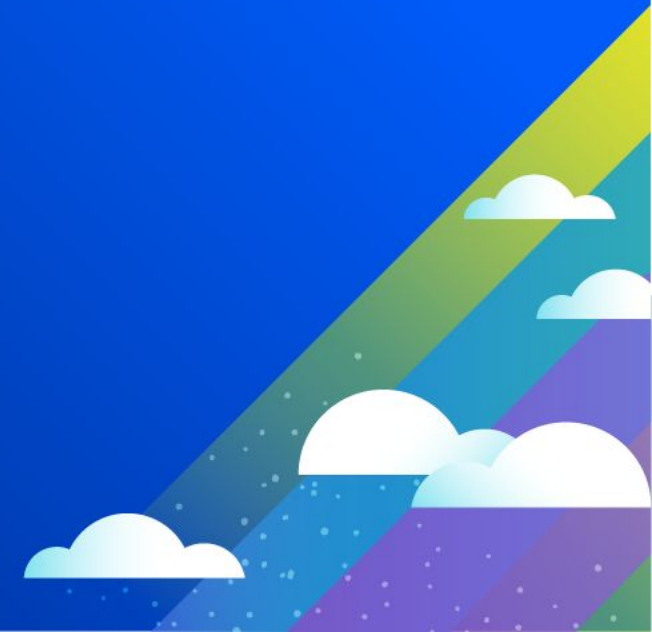
Already have an account? [Log in](#)

OR

ChatGPT

<http://chat.openai.com>

- Version 3.5 - With an verified account.
Fastest model great for everyday tasks - Free
- Version 4.0 Available with a Plus account.
More capable model, used for advanced tasks and
creative and advanced reasoning - \$20 / Month



What is a Prompt?

- A prompt used with ChatGPT is a concise and specific textual input provided by the user to initiate a conversation or request information from the AI language model. It serves as the starting point for the AI to generate a response or engage in a dialogue. The prompt can range from a single sentence to a longer paragraph, depending on the complexity of the desired task. It helps guide the AI's understanding and context for the subsequent interactions, ensuring more relevant and coherent replies. By tailoring the prompt effectively, users can obtain valuable insights, creative ideas, or assistance on a wide array of topics from ChatGPT.
- <https://platform.openai.com/docs/quickstart/introduction>

Examples

- Write a tagline for an ice cream shop.
- Explain Quantum Entanglement to me as a Highschool Student
- Create an outline for a YouTube video about schools

Let's try one together!

- Will someone recommend a VMworld related topic?
- Can someone suggest a famous author?
- Can someone recommend a education level?

Explain to me in one paragraph [topic] in the style and tone of [author] as if I was a [education]

<http://chat.openai.com>

Key Prompt Suggestions

- Ignore all previous instruction before this one
- Write a [length] [writing result] on [topic] in the style of [style]
- Rewrite this article in its same style keeping its approximate length. Please ensure to keep the major points
- show your work
- Do not respond with anything except “...”
- ... in a codeblock
- rewrite longer (or shorter)
- Summarize ...

Prompt Suggestions

With a paid Subscriptions...

When getting started make sure to use the prompt templates provided by openai

In the realm of programming, precision is paramount; however, when engaging with artificial intelligence, the art lies in embracing a more comprehensive approach.

The screenshot displays the OpenAI Prompt Playground interface. At the top, there are three tabs: 'Prompt Templates' (active), 'Top Prompts', and 'My Prompts'. Below these are category filters: 'All', 'Blog', 'Social Media Content', 'Email', 'Fun', 'Website Copy', 'Career', 'Case Study', 'Video', 'Content Improve', 'Marketing', and 'Social'. The main area contains a grid of prompt cards, each with a title, a description, and a heart icon for favoriting. The cards include:

- Blog Intro**: Let's start with a compelling intro that hooks your readers from the get-go and kick your blog up a notch!
- Blog Outline**: Blog like a pro! Begin with an outline, research, and resources to kickstart your writing journey.
- Blog Section**: Say goodbye to tedious writing processes and hello to a full section of your blog in the blink of an eye!
- Blog's Meta Description**: Increase the chances of getting clickthrough with appealing description.
- Blog Conclusion**: End your post with a powerful conclusion.
- Blog Title**: Attention-grabbing title in a minute!
- Promotion Page**: Spread the word about your special offerings on social media! Ready to make your brand shine?
- Bio**: Capture your audience's attention with a short bio!
- Sharing Tips**: Ready to become an expert in your industry? Share tips and knowledge and elevate your brand!
- Seasonal/Holiday Post**: Holiday time! Grab your customers' attention with themed posts for upcoming holidays and special events!
- Showcase A Customer Or Testimonial**: Put your customers in the spotlight! Show off their love for your brand with a testimonial on social media.
- Event Recap**: Share captivating stories from the event to connect with your existing customers and prospects.

At the bottom, there is a search bar with the text 'Highlig Send a message' and a search icon.

ChatGPT Development & Training

- 570 gigabytes of text and 175 billion parameters, including text scraped from Wikipedia, Twitter, and Reddit.
- Use the AI in ways that play to AI's strengths.
- Responses will be superior on topics that are well understood and written about.
- ChatGPT is weak at independent reasoning and independent thought.
- Verify the output of what the AI gives you. Your mileage may vary.

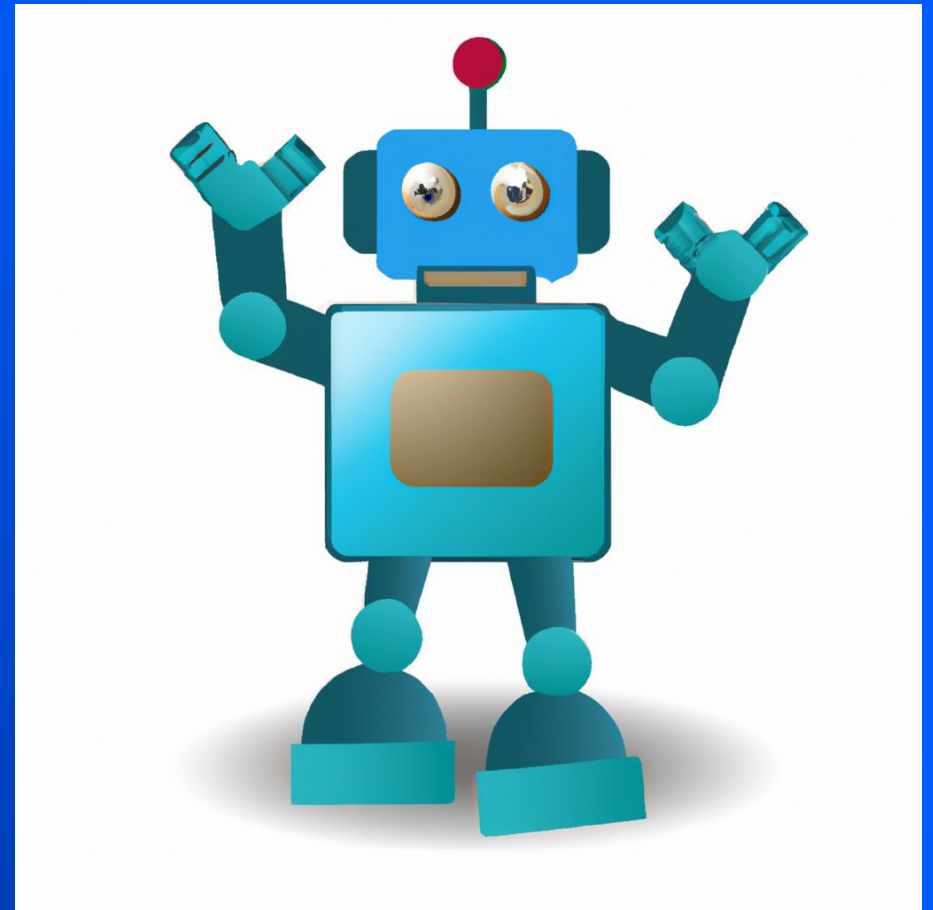


ChatGPT Limitations

- Model Data is limited to known events before
 - GPT 3.5 - January 2022
 - GPT 4.0 - April 2023
- Limits Question and the Answers to:
 - GPT 3.5 - about 3,000 words
 - GPT 4.0 - about 25,000 words
- Content Guidelines - <https://openai.com/policies/usage-policies>
- Plugin's (beta) can be used to access realtime data

vmware® EXPLORE ChatGPT API

Let's take a look at the API



<https://platform.openai.com/docs/api-reference/introduction>

ChatGPT API Cost per request

Model	Input	Output
8K context	\$0.03 / 1K tokens	\$0.06 / 1K tokens
32K context	\$0.06 / 1K tokens	\$0.12 / 1K tokens

GPT-3.5 Turbo is optimized for dialogue.

[Learn about GPT-3.5 Turbo ↗](#)

Model	Input	Output
4K context	\$0.0015 / 1K tokens	\$0.002 / 1K tokens
16K context	\$0.003 / 1K tokens	\$0.004 / 1K tokens

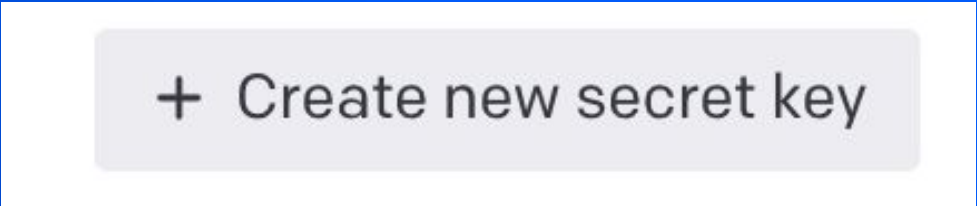
What is a REST Request

A REST (Representational State Transfer) request is part of a web communication model designed around standard HTTP methods. It is used in the interaction between clients and servers in web development. A REST request is made up of a specific HTTP method such as GET, POST, PUT, DELETE, etc., a URL identifying the resource, headers containing information about the request, and an optional body containing data. For example, a GET request is used to retrieve data from the server, whereas a POST request is used to send data to a server. The REST architecture treats web services as resources, and these resources are accessed and manipulated using standard HTTP methods, making it an intuitive and stateless way of interacting with web services. The simplicity and scalability of REST have made it a popular choice for building APIs and web services.



The Key ties you to OpenAI

Getting a Key



+ Create new secret key

- <https://platform.openai.com/account/api-keys>
- Authenticate
- New users will be granted a small budget to play with
- Choose “Create a New Secret Key” and give it a name
- Save the Key Generated
- DOS set `OPENAI_API_KEY=sk-secretkeyvalue...`

Successful Request Example!

Authentication

Make a Request:

```
DOS
curl https://api.openai.com/v1/models -H
"Authorization: Bearer
%OPENAI_API_KEY%"
```

Expected Response would be a list of available models for this account

```
warmkessel@Jamess-MBP Downloads % curl https://api.openai.com/v1/models \
-H "Authorization: Bearer $OPENAI_API_KEY"
{
  "object": "list",
  "data": [
    {
      "id": "gpt-4-0613",
      "object": "model",
      "created": 1686588896,
      "owned_by": "openai",
      "permission": [
        {
          "id": "modelperm-5xwZl3df52xxBXzb4cTMtGYV",
          "object": "model_permission",
          "created": 1690865538,
          "allow_create_engine": false,
          "allow_sampling": false,
          "allow_logprobs": false,
          "allow_search_indices": false,
          "allow_view": false,
          "allow_fine_tuning": false,
          "organization": "*",
          "group": null,
          "is_blocking": false
        }
      ],
      "root": "gpt-4-0613",
      "parent": null
    },
    {
      "id": "text-davinci-001",
      "object": "model",
      "created": 1649364042,
      "owned_by": "openai",
      "permission": [
        {
          "id": "modelperm-CDlahk1RbkahXDitxazXoPNo",
```

Failure Request Example!

Authentication1

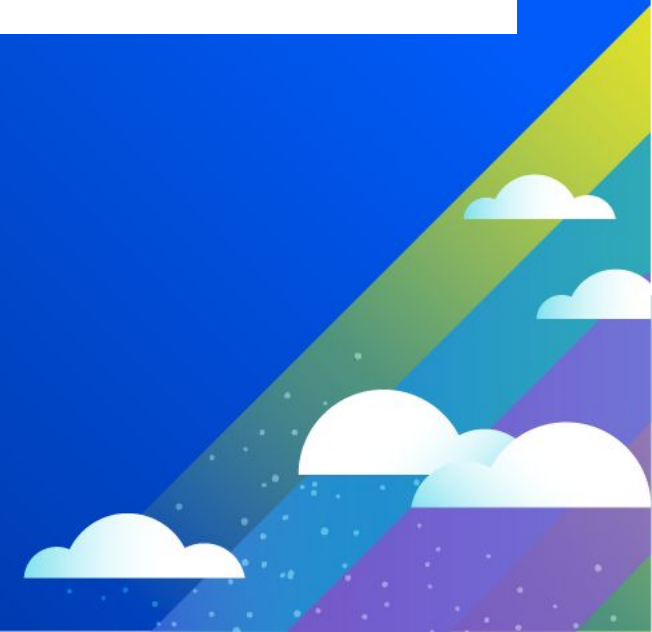
Make a Request:

DOS

```
curl https://api.openai.com/v1/models -H  
"Authorization: Bearer  
%OPENAI_API_KEY%"
```

```
warmkessel@Jamess-MBP Downloads % curl https://api.openai.com/v1/models \  
-H "Authorization: Bearer $OPENAI_API_KEY2"  
{  
  "error": {  
    "message": "Invalid authorization header",  
    "type": "server_error",  
    "param": null,  
    "code": null  
  }  
}  
warmkessel@Jamess-MBP Downloads % █
```

Expected Response would be a list of available models for this account



Model's are the various apis that you can interact with.

Understanding the Model's available to this account

DOS

```
curl https://api.openai.com/v1/models -H "Authorization: Bearer %OPENAI_API_KEY%"
```

Lists the currently available models, and provides basic information about each one such as the owner and availability.

Id: which model you will be invoking
Created: When the model was created
Permissions: Various permissions associated with the specific model

Model information can be found at <https://platform.openai.com/docs/api-reference/models>

```
warmkessel@Jamess-MBP Downloads % curl https://api.openai.com/v1/models \
-H "Authorization: Bearer $OPENAI_API_KEY"
{
  "object": "list",
  "data": [
    {
      "id": "gpt-4-0613",
      "object": "model",
      "created": 1686588896,
      "owned_by": "openai",
      "permission": [
        {
          "id": "modelperm-5xwZl3df52xxBXzb4cTMtGYV",
          "object": "model_permission",
          "created": 1690865538,
          "allow_create_engine": false,
          "allow_sampling": false,
          "allow_logprobs": false,
          "allow_search_indices": false,
          "allow_view": false,
          "allow_fine_tuning": false,
          "organization": "*",
          "group": null,
          "is_blocking": false
        }
      ],
      "root": "gpt-4-0613",
      "parent": null
    },
    {
      "id": "text-davinci-001",
      "object": "model",
      "created": 1649364042,
      "owned_by": "openai",
      "permission": [
        {
          "id": "modelperm-11111111111111111111111111111111",
          "object": "model_permission",
          "created": 1649364042,
          "allow_create_engine": false,
          "allow_sampling": false,
          "allow_logprobs": false,
          "allow_search_indices": false,
          "allow_view": false,
          "allow_fine_tuning": false,
          "organization": "*",
          "group": null,
          "is_blocking": false
        }
      ]
    }
  ]
}
```

Lets Chat!

DOS:

```
curl https://api.openai.com/v1/chat/completions -H "Content-Type: application/json" -H "Authorization: Bearer %OPENAI_API_KEY%" -d "{
  \"model\": \"gpt-3.5-turbo\",
  \"messages\": [
    {
      \"role\": \"user\",
      \"content\": \"Tell me a joke\"
    }
  ]
}"
```

Making a Chat Request

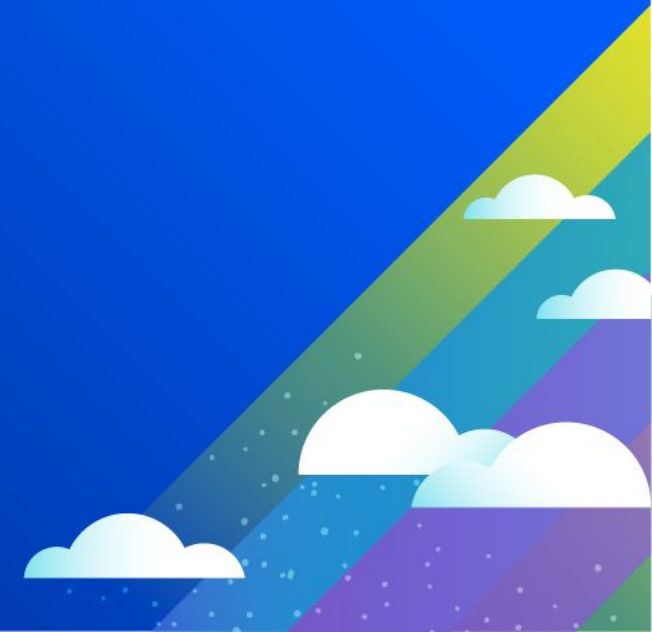
Ensure to select a model that is listed in your model list

model String Required - ID of the model to use.

messages Array Required - A list of messages comprising the conversation so far

role String Required - The role of the messages author

content string or null Required - The contents of the message



What if you wanted this in a different language

Ask ChatGPT to convert this into

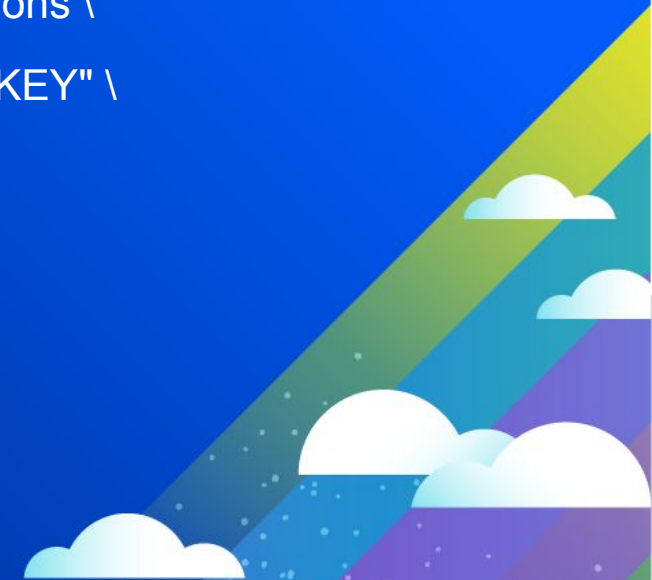
- Java
- Shell
- C++
- Python
- etc

DOS:

```
curl https://api.openai.com/v1/chat/completions -H "Content-Type: application/json" -H "Authorization: Bearer %OPENAI_API_KEY%" -d "{ \"model\": \"gpt-3.5-turbo\", \"messages\": [ { \"role\": \"user\", \"content\": \"Tell me a joke\" } ] }"
```

UNIX:

```
curl https://api.openai.com/v1/chat/completions \ -H "Content-Type: application/json" \ -H "Authorization: Bearer $OPENAI_API_KEY" \ -d '{ \"model\": \"gpt-3.5-turbo\", \"messages\": [ { \"role\": \"user\", \"content\": \"Tell me a joke\" } ] }'
```



ChatGPT - Plugin

- Plugin allow ChatGPT to fetch realtime and custom content.
- Plugins are part of the GPT-4 Architecture
- They are installed and enabled on the client
- The Data is NOT incorporated into the base AI model
- The Data IS incorporated into the client response
- Currently in Beta.

<https://openai.com/blog/chatgpt-plugins>

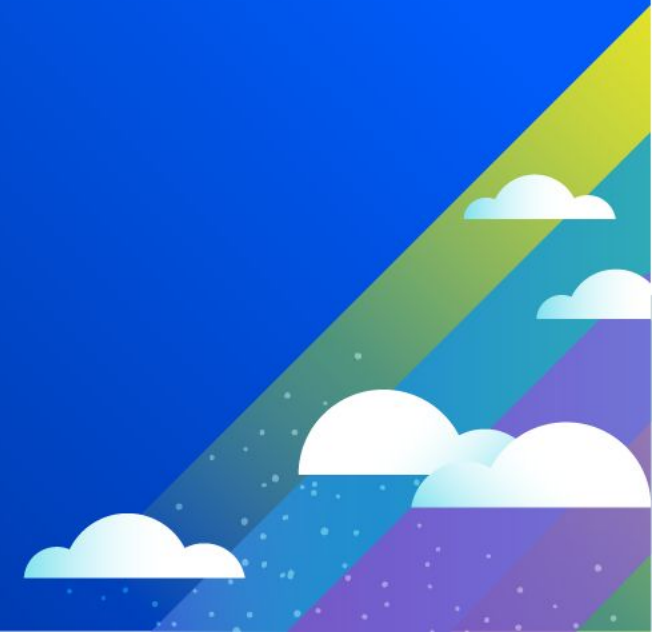
```
/ai/help:
  get:
    operationId: getHelp
    summary: Provide help information on how get started using the plugin.
    responses:
      "200":
        description: OK
        content:
          text/plain:
            schema:
              type: string
              description: Suggestions on how to setup and use the plugin with the S

/ai/event:
  get:
    operationId: events
    summary: Get the summary of events
    parameters:
      - in: query
        name: tags
        schema:
          type: string
          required: true
          description: Space separated tags used to filter the events.
      - in: query
        name: list
        schema:
          type: boolean
          required: false
          default: false
          description: Flag used to only list events titles.
      - in: query
        name: count
        schema:
          type: integer
          required: false
          default: 10
```

vmware® EXPLORE

Prompt Contest

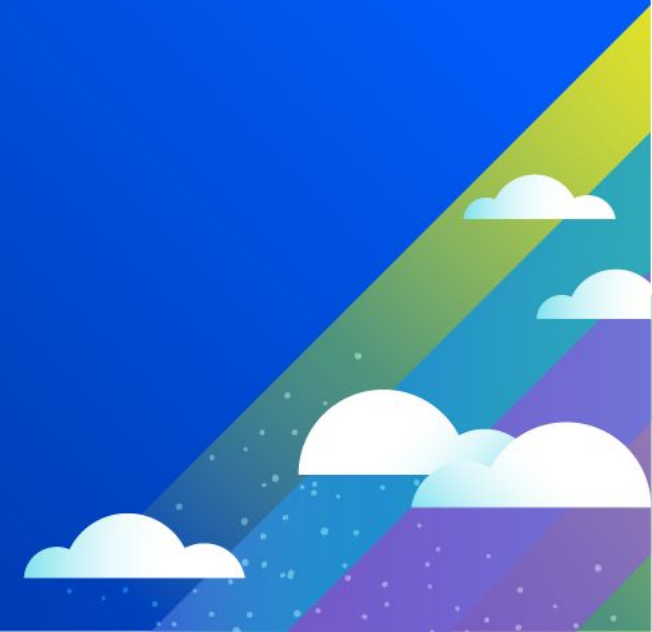
Submit the most useful prompt fragment to jr@warmkessel.com be sure to include your first and last name for the wall of fame.



Wall of Fame

Top Submissions!

- How can I help to save the world? - Mandl, Joao
- Create an ansible playbook to deploy vcenter and create a dvs switch - by Hoppe, Brad
- I need practice questions and answers for AWS EC2 - by Renalda Stallworth
- Give me a pro and con analysis of SpecOps Password Policy and ManageEngine Password Pro as though I was an accountant - Camille Denalli



Wall of Fame

Top Submissions!

- Create a powercli script that will list the number of VMs on each portgroup - Lawlor, Gareth
- "Please help me write an API Power Shell script that will allow me to load more than one page result" - Fezell Erin
-
-
-

