



Introduction

You can interact with the API through HTTP requests from any language, via our official Python bindings, our official Node.js library, or a [community-maintained library](#).

To install the official Python bindings, run the following command:

```
pip install openai
```

To install the official Node.js library, run the following command in your Node.js project directory:

```
npm install openai
```

Authentication

The OpenAI API uses API keys for authentication. Visit your [API Keys](#) page to retrieve the API key you'll use in your requests.

Remember that your API key is a secret! Do not share it with others or expose it in any client-side code (browsers, apps). Production requests must be routed through your own backend server where your API key can be securely loaded from an environment variable or key management service.

All API requests should include your API key in an `Authorization` HTTP header as follows:

```
Authorization: Bearer OPENAI_API_KEY
```

Requesting organization

For users who belong to multiple organizations, you can pass a header to specify which organization is used for an API request. Usage from these API requests will count against the



```
1 curl https://api.openai.com/v1/models \  
2   -H "Authorization: Bearer $OPENAI_API_KEY" \  
3   -H "OpenAI-Organization: YOUR_ORG_ID"
```

Example with the `openai` Python package:

```
1 import os  
2 import openai  
3 openai.organization = "YOUR_ORG_ID"  
4 openai.api_key = os.getenv("OPENAI_API_KEY")  
5 openai.Model.list()
```

Example with the `openai` Node.js package:

```
1 import { Configuration, OpenAIApi } from "openai";  
2 const configuration = new Configuration({  
3   organization: "YOUR_ORG_ID",  
4   apiKey: process.env.OPENAI_API_KEY,  
5 });  
6 const openai = new OpenAIApi(configuration);  
7 const response = await openai.listEngines();
```

Organization IDs can be found on your [Organization settings](#) page.

Making requests

You can paste the command below into your terminal to run your first API request. Make sure to replace `$OPENAI_API_KEY` with your secret API key.

```
1 curl https://api.openai.com/v1/chat/completions \  
2   -H "Content-Type: application/json" \  
3   -d '{"model": "gpt-3.5-turbo", "messages": [{"role": "user", "content": "Hello OpenAI!"}]}'
```



```
5     model: "gpt-3.5-turbo",
6     "messages": [{"role": "user", "content": "Say this is a test!"}],
7     "temperature": 0.7
8   }'
```

This request queries the `gpt-3.5-turbo` model to complete the text starting with a prompt of "Say *this is a test*". You should get a response back that resembles the following:

```
1  {
2    "id": "chatcmpl-abc123",
3    "object": "chat.completion",
4    "created": 1677858242,
5    "model": "gpt-3.5-turbo-0301",
6    "usage": {
7      "prompt_tokens": 13,
8      "completion_tokens": 7,
9      "total_tokens": 20
10   },
11   "choices": [
12     {
13       "message": {
14         "role": "assistant",
15         "content": "\n\nThis is a test!"
16       },
17       "finish_reason": "stop",
18       "index": 0
19     }
20   ]
21 }
```

Now you've generated your first chat completion. We can see the `finish_reason` is `stop` which means the API returned the full completion generated by the model. In the above request, we only generated a single message but you can set the `n` parameter to generate multiple messages choices.



List and describe the various models available in the API. You can refer to the [Models](#) documentation to understand what models are available and the differences between them.

List models

GET <https://api.openai.com/v1/models>

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

Example request

curl Copy

```
1 curl https://api.openai.com/v1/models \  
2   -H "Authorization: Bearer $OPENAI_API_KEY"
```

Response

Copy

```
1  {  
2    "data": [  
3      {  
4        "id": "model-id-0",  
5        "object": "model",  
6        "owned_by": "organization-owner",  
7        "permission": [...]  
8      },  
9      {  
10       "id": "model-id-1",  
11       "object": "model",  
12       "owned_by": "organization-owner",  
13       "permission": [...]  
14     },  
15     {  
16       "id": "model-id-2",  
17       "object": "model",  
18       "owned_by": "openai",  
19       "permission": [...]  
20     },  
21   ],
```



Retrieve model

GET `https://api.openai.com/v1/models/{model}`

Retrieves a model instance, providing basic information about the model such as the owner and permissioning.

Path parameters

`model` string **Required**

The ID of the model to use for this request

Example request

text-davinci-003 ▾ curl ▾ Copy

```
1 curl https://api.openai.com/v1/models/text-davinci-003 \  
2   -H "Authorization: Bearer $OPENAI_API_KEY"
```

Response

text-davinci-003 ▾ Copy

```
1 {  
2   "id": "text-davinci-003",  
3   "object": "model",  
4   "owned_by": "openai",  
5   "permission": [...]  
6 }
```

Chat

Given a list of messages comprising a conversation, the model will return a response.



Create chat completion

POST `https://api.openai.com/v1/chat/completions`

Creates a model response for the given chat conversation.

Request body

`model` string **Required**

ID of the model to use. See the [model endpoint compatibility](#) table for details on which models work with the Chat API.

`messages` array **Required**

A list of messages comprising the conversation so far. [Example Python code](#).

`role` string **Required**

The role of the messages author. One of `system`, `user`, `assistant`, or `function`.

`content` string Optional

The contents of the message. `content` is required for all messages except assistant messages with function calls.

`name` string Optional

The name of the author of this message. `name` is required if role is `function`, and it should be the name of the function whose response is in the `content`. May contain a-z, A-Z, 0-9, and underscores, with a maximum length of 64 characters.

`function_call` object Optional

The name and arguments of a function that should be called, as generated by the model.

`functions` array Optional

A list of functions the model may generate JSON inputs for.

`name` string **Required**

The name of the function to be called. Must be a-z, A-Z, 0-9, or contain underscores and dashes, with a maximum length of 64.



parameters object Optional

The parameters the functions accepts, described as a JSON Schema object. See the [guide](#) for examples, and the [JSON Schema reference](#) for documentation about the format.

function_call string or object Optional

Controls how the model responds to function calls. "none" means the model does not call a function, and responds to the end-user. "auto" means the model can pick between an end-user or calling a function. Specifying a particular function via `{"name": "my_function"}` forces the model to call that function. "none" is the default when no functions are present. "auto" is the default if functions are present.

temperature number Optional Defaults to 1

What sampling temperature to use, between 0 and 2. Higher values like 0.8 will make the output more random, while lower values like 0.2 will make it more focused and deterministic.

We generally recommend altering this or `top_p` but not both.

top_p number Optional Defaults to 1

An alternative to sampling with temperature, called nucleus sampling, where the model considers the results of the tokens with top_p probability mass. So 0.1 means only the tokens comprising the top 10% probability mass are considered.

We generally recommend altering this or `temperature` but not both.

n integer Optional Defaults to 1

How many chat completion choices to generate for each input message.

stream boolean Optional Defaults to false

If set, partial message deltas will be sent, like in ChatGPT. Tokens will be sent as data-only **server-sent events** as they become available, with the stream terminated by a `data: [DONE]` message.

[Example Python code.](#)

stop string or array Optional Defaults to null

Up to 4 sequences where the API will stop generating further tokens.

max_tokens integer Optional Defaults to inf



Example Python code for counting tokens.

`presence_penalty` number Optional Defaults to 0

Number between -2.0 and 2.0. Positive values penalize new tokens based on whether they appear in the text so far, increasing the model's likelihood to talk about new topics.

[See more information about frequency and presence penalties.](#)

`frequency_penalty` number Optional Defaults to 0

Number between -2.0 and 2.0. Positive values penalize new tokens based on their existing frequency in the text so far, decreasing the model's likelihood to repeat the same line verbatim.

[See more information about frequency and presence penalties.](#)

`logit_bias` map Optional Defaults to null

Modify the likelihood of specified tokens appearing in the completion.

Accepts a json object that maps tokens (specified by their token ID in the tokenizer) to an associated bias value from -100 to 100. Mathematically, the bias is added to the logits generated by the model prior to sampling. The exact effect will vary per model, but values between -1 and 1 should decrease or increase likelihood of selection; values like -100 or 100 should result in a ban or exclusive selection of the relevant token.

`user` string Optional

A unique identifier representing your end-user, which can help OpenAI to monitor and detect abuse.

[Learn more.](#)

Example request

curl Copy

```
1 curl https://api.openai.com/v1/chat/completions \
2   -H "Content-Type: application/json" \
3   -H "Authorization: Bearer $OPENAI_API_KEY" \
4   -d '{
5     "model": "gpt-3.5-turbo",
6     "messages": [{"role": "system", "content": "You are a helpful assistant."}, {"role": "user", "content": "Hello!"}]
7   }'
```

Parameters

Copy



```
3   messages : [{ role : system , content : you are a helpful assistant. }, { role : user , content : Hello there, how may I assist you today? }, { role : assistant , content : Hello there, how may I assist you today? } ]
4 }
```

Response

Copy

```
1  {
2    "id": "chatcmpl-123",
3    "object": "chat.completion",
4    "created": 1677652288,
5    "choices": [{
6      "index": 0,
7      "message": {
8        "role": "assistant",
9        "content": "\n\nHello there, how may I assist you today?",
10     },
11     "finish_reason": "stop"
12   }],
13   "usage": {
14     "prompt_tokens": 9,
15     "completion_tokens": 12,
16     "total_tokens": 21
17   }
18 }
```

Completions

Given a prompt, the model will return one or more predicted completions, and can also return the probabilities of alternative tokens at each position.

Create completion

POST <https://api.openai.com/v1/completions>

Creates a completion for the provided prompt and parameters.



model string **Required**

ID of the model to use. You can use the [List models](#) API to see all of your available models, or see our [Model overview](#) for descriptions of them.

prompt string or array **Required**

The prompt(s) to generate completions for, encoded as a string, array of strings, array of tokens, or array of token arrays.

Note that `<|endoftext|>` is the document separator that the model sees during training, so if a prompt is not specified the model will generate as if from the beginning of a new document.

suffix string Optional Defaults to null

The suffix that comes after a completion of inserted text.

max_tokens integer Optional Defaults to 16

The maximum number of **tokens** to generate in the completion.

The token count of your prompt plus `max_tokens` cannot exceed the model's context length.

[Example Python code](#) for counting tokens.

temperature number Optional Defaults to 1

What sampling temperature to use, between 0 and 2. Higher values like 0.8 will make the output more random, while lower values like 0.2 will make it more focused and deterministic.

We generally recommend altering this or `top_p` but not both.

top_p number Optional Defaults to 1

An alternative to sampling with temperature, called nucleus sampling, where the model considers the results of the tokens with `top_p` probability mass. So 0.1 means only the tokens comprising the top 10% probability mass are considered.

We generally recommend altering this or `temperature` but not both.

n integer Optional Defaults to 1

How many completions to generate for each prompt.

Note: Because this parameter generates many completions, it can quickly consume your token quota. Use carefully and ensure that you have reasonable settings for `max_tokens` and `stop`.

stream boolean Optional Defaults to false



logprobs integer Optional Defaults to null

Include the log probabilities on the `logprobs` most likely tokens, as well the chosen tokens. For example, if `logprobs` is 5, the API will return a list of the 5 most likely tokens. The API will always return the `logprob` of the sampled token, so there may be up to `logprobs+1` elements in the response.

The maximum value for `logprobs` is 5.

echo boolean Optional Defaults to false

Echo back the prompt in addition to the completion

stop string or array Optional Defaults to null

Up to 4 sequences where the API will stop generating further tokens. The returned text will not contain the stop sequence.

presence_penalty number Optional Defaults to 0

Number between -2.0 and 2.0. Positive values penalize new tokens based on whether they appear in the text so far, increasing the model's likelihood to talk about new topics.

[See more information about frequency and presence penalties.](#)

frequency_penalty number Optional Defaults to 0

Number between -2.0 and 2.0. Positive values penalize new tokens based on their existing frequency in the text so far, decreasing the model's likelihood to repeat the same line verbatim.

[See more information about frequency and presence penalties.](#)

best_of integer Optional Defaults to 1

Generates `best_of` completions server-side and returns the "best" (the one with the highest log probability per token). Results cannot be streamed.

When used with `n`, `best_of` controls the number of candidate completions and `n` specifies how many to return – `best_of` must be greater than `n`.

Note: Because this parameter generates many completions, it can quickly consume your token quota. Use carefully and ensure that you have reasonable settings for `max_tokens` and `stop`.

logit_bias map Optional Defaults to null



associated bias value from -100 to 100. You can use this [tokenizer tool](#) (which works for both GPT-2 and GPT-3) to convert text to token IDs. Mathematically, the bias is added to the logits generated by the model prior to sampling. The exact effect will vary per model, but values between -1 and 1 should decrease or increase likelihood of selection; values like -100 or 100 should result in a ban or exclusive selection of the relevant token.

As an example, you can pass `{"50256": -100}` to prevent the `<|endoftext|>` token from being generated.

user string Optional

A unique identifier representing your end-user, which can help OpenAI to monitor and detect abuse.

[Learn more.](#)

Example request

text-davinci-003 ▾ curl ▾ Copy

```
1 curl https://api.openai.com/v1/completions \  
2   -H "Content-Type: application/json" \  
3   -H "Authorization: Bearer $OPENAI_API_KEY" \  
4   -d '{  
5     "model": "text-davinci-003",  
6     "prompt": "Say this is a test",  
7     "max_tokens": 7,  
8     "temperature": 0  
9   }'
```

Parameters

text-davinci-003 ▾ Copy

```
1 {  
2   "model": "text-davinci-003",  
3   "prompt": "Say this is a test",  
4   "max_tokens": 7,  
5   "temperature": 0,  
6   "top_p": 1,  
7   "n": 1,  
8   "stream": false,  
9   "logprobs": null,  
10  "stop": "\n"  
11 }
```

Response

text-davinci-003 ▾ Copy



```
3     object : text_completion ,
4     "created": 1589478378,
5     "model": "text-davinci-003",
6     "choices": [
7       {
8         "text": "\n\nThis is indeed a test",
9         "index": 0,
10        "logprobs": null,
11        "finish_reason": "length"
12      }
13    ],
14    "usage": {
15      "prompt_tokens": 5,
16      "completion_tokens": 7,
17      "total_tokens": 12
18    }
19  }
```

Edits

Given a prompt and an instruction, the model will return an edited version of the prompt.

Create edit

POST <https://api.openai.com/v1/edits>

Creates a new edit for the provided input, instruction, and parameters.

Request body

model string **Required**

ID of the model to use. You can use the `text-davinci-edit-001` or `code-davinci-edit-001` model with this endpoint.

input string Optional Defaults to "



Instruction string Required

The instruction that tells the model how to edit the prompt.

n integer Optional Defaults to 1

How many edits to generate for the input and instruction.

temperature number Optional Defaults to 1

What sampling temperature to use, between 0 and 2. Higher values like 0.8 will make the output more random, while lower values like 0.2 will make it more focused and deterministic.

We generally recommend altering this or `top_p` but not both.

top_p number Optional Defaults to 1

An alternative to sampling with temperature, called nucleus sampling, where the model considers the results of the tokens with top_p probability mass. So 0.1 means only the tokens comprising the top 10% probability mass are considered.

We generally recommend altering this or `temperature` but not both.

Example request

text-davinci-edit-001 ▾ curl ▾ Copy

```
1 curl https://api.openai.com/v1/edits \
2   -H "Content-Type: application/json" \
3   -H "Authorization: Bearer $OPENAI_API_KEY" \
4   -d '{
5     "model": "text-davinci-edit-001",
6     "input": "What day of the wek is it?",
7     "instruction": "Fix the spelling mistakes"
8   }'
```

Parameters

text-davinci-edit-001 ▾ Copy

```
1 {
2   "model": "text-davinci-edit-001",
3   "input": "What day of the wek is it?",
4   "instruction": "Fix the spelling mistakes"
5 }
```

Response

Copy



```
3     created : 1589478378,  
4     "choices": [  
5         {  
6             "text": "What day of the week is it?",  
7             "index": 0,  
8         }  
9     ],  
10    "usage": {  
11        "prompt_tokens": 25,  
12        "completion_tokens": 32,  
13        "total_tokens": 57  
14    }  
15 }
```

Images

Given a prompt and/or an input image, the model will generate a new image.

Related guide: [Image generation](#)

Create image Beta

POST <https://api.openai.com/v1/images/generations>

Creates an image given a prompt.

Request body

prompt string Required

A text description of the desired image(s). The maximum length is 1000 characters.

n integer Optional Defaults to 1

The number of images to generate. Must be between 1 and 10.

size string Optional Defaults to 1024x1024



response_format string Optional Defaults to url

The format in which the generated images are returned. Must be one of `url` or `b64_json`.

user string Optional

A unique identifier representing your end-user, which can help OpenAI to monitor and detect abuse.

[Learn more.](#)

Example request

curl Copy

```
1 curl https://api.openai.com/v1/images/generations \
2   -H "Content-Type: application/json" \
3   -H "Authorization: Bearer $OPENAI_API_KEY" \
4   -d '{
5     "prompt": "A cute baby sea otter",
6     "n": 2,
7     "size": "1024x1024"
8   }'
```

Parameters

Copy

```
1 {
2   "prompt": "A cute baby sea otter",
3   "n": 2,
4   "size": "1024x1024"
5 }
```

Response

Copy

```
1 {
2   "created": 1589478378,
3   "data": [
4     {
5       "url": "https://..."
6     },
7     {
8       "url": "https://..."
9     }
10  ]
11 }
```




Create image edit

POST `https://api.openai.com/v1/images/edits`

Creates an edited or extended image given an original image and a prompt.

Request body

`image` string **Required**

The image to edit. Must be a valid PNG file, less than 4MB, and square. If mask is not provided, image must have transparency, which will be used as the mask.

`mask` string Optional

An additional image whose fully transparent areas (e.g. where alpha is zero) indicate where `image` should be edited. Must be a valid PNG file, less than 4MB, and have the same dimensions as `image`.

`prompt` string **Required**

A text description of the desired image(s). The maximum length is 1000 characters.

`n` integer Optional Defaults to 1

The number of images to generate. Must be between 1 and 10.

`size` string Optional Defaults to 1024x1024

The size of the generated images. Must be one of `256x256`, `512x512`, or `1024x1024`.

`response_format` string Optional Defaults to url

The format in which the generated images are returned. Must be one of `url` or `b64_json`.

`user` string Optional

A unique identifier representing your end-user, which can help OpenAI to monitor and detect abuse.

[Learn more.](#)

Example request

curl Copy

```
1 curl https://api.openai.com/v1/images/edits \
2   -H "Authorization: Bearer $OPENAI_API_KEY" \
3   -F image="@otter.png" \
```



```
7 -F size="1024x1024"
```

Response

Copy

```
1 {
2   "created": 1589478378,
3   "data": [
4     {
5       "url": "https://..."
6     },
7     {
8       "url": "https://..."
9     }
10  ]
11 }
```

Create image variation Beta

POST <https://api.openai.com/v1/images/variations>

Creates a variation of a given image.

Request body

image string Required

The image to use as the basis for the variation(s). Must be a valid PNG file, less than 4MB, and square.

n integer Optional Defaults to 1

The number of images to generate. Must be between 1 and 10.

size string Optional Defaults to 1024x1024

The size of the generated images. Must be one of `256x256` , `512x512` , or `1024x1024` .

response_format string Optional Defaults to url

The format in which the generated images are returned. Must be one of `url` or `b64_json` .



[Learn more.](#)

Example request

curl Copy

```
1 curl https://api.openai.com/v1/images/variations \  
2   -H "Authorization: Bearer $OPENAI_API_KEY" \  
3   -F image="@otter.png" \  
4   -F n=2 \  
5   -F size="1024x1024"
```

Response

Copy

```
1  {  
2    "created": 1589478378,  
3    "data": [  
4      {  
5        "url": "https://..."  
6      },  
7      {  
8        "url": "https://..."  
9      }  
10   ]  
11  }
```

Embeddings

Get a vector representation of a given input that can be easily consumed by machine learning models and algorithms.

Related guide: [Embeddings](#)

Create embeddings

POST <https://api.openai.com/v1/embeddings>



model string Required

input string or array **Required**

user string Optional

Example request

curl Copy

Parameters

 Copy

Response

Copy

```
1 {
2   "object": "list",
3   "data": [
```



```
7         0.0023064255,  
8         -0.009327292,  
9         .... (1536 floats total for ada-002)  
10        -0.0028842222,  
11    ],  
12    "index": 0  
13  }  
14 ],  
15 "model": "text-embedding-ada-002",  
16 "usage": {  
17     "prompt_tokens": 8,  
18     "total_tokens": 8  
19 }  
20 }
```

Audio

Learn how to turn audio into text.

Related guide: [Speech to text](#)

Create transcription Beta

POST <https://api.openai.com/v1/audio/transcriptions>

Transcribes audio into the input language.

Request body

`file` file Required

The audio file object (not file name) to transcribe, in one of these formats: mp3, mp4, mpeg, mpga, m4a, wav, or webm.

`model` string Required



prompt string Optional

An optional text to guide the model's style or continue a previous audio segment. The **prompt** should match the audio language.

response_format string Optional Defaults to json

The format of the transcript output, in one of these options: json, text, srt, verbose_json, or vtt.

temperature number Optional Defaults to 0

The sampling temperature, between 0 and 1. Higher values like 0.8 will make the output more random, while lower values like 0.2 will make it more focused and deterministic. If set to 0, the model will use **log probability** to automatically increase the temperature until certain thresholds are hit.

language string Optional

The language of the input audio. Supplying the input language in **ISO-639-1** format will improve accuracy and latency.

Example request

curl Copy

```
1 curl https://api.openai.com/v1/audio/transcriptions \  
2   -H "Authorization: Bearer $OPENAI_API_KEY" \  
3   -H "Content-Type: multipart/form-data" \  
4   -F file="@/path/to/file/audio.mp3" \  
5   -F model="whisper-1"
```

Parameters

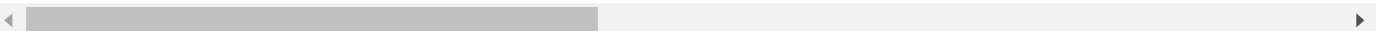
Copy

```
1 {  
2   "file": "audio.mp3",  
3   "model": "whisper-1"  
4 }
```

Response

Copy

```
1 {  
2   "text": "Imagine the wildest idea that you've ever had, and you're curious about it"  
3 }
```





Create translation

POST `https://api.openai.com/v1/audio/translations`

Translates audio into English.

Request body

`file` file **Required**

The audio file object (not file name) translate, in one of these formats: mp3, mp4, mpeg, mpga, m4a, wav, or webm.

`model` string **Required**

ID of the model to use. Only `whisper-1` is currently available.

`prompt` string Optional

An optional text to guide the model's style or continue a previous audio segment. The **prompt** should be in English.

`response_format` string Optional Defaults to json

The format of the transcript output, in one of these options: json, text, srt, verbose_json, or vtt.

`temperature` number Optional Defaults to 0

The sampling temperature, between 0 and 1. Higher values like 0.8 will make the output more random, while lower values like 0.2 will make it more focused and deterministic. If set to 0, the model will use **log probability** to automatically increase the temperature until certain thresholds are hit.

Example request

curl Copy

```
1 curl https://api.openai.com/v1/audio/translations \
2   -H "Authorization: Bearer $OPENAI_API_KEY" \
3   -H "Content-Type: multipart/form-data" \
4   -F file="@/path/to/file/german.m4a" \
5   -F model="whisper-1"
```

Parameters

Copy



```
3   model : whisper-1
4 }
```

Response

Copy

```
1 {
2   "text": "Hello, my name is Wolfgang and I come from Germany. Where are you heading
3 }
```

Files

Files are used to upload documents that can be used with features like **Fine-tuning**.

List files

GET <https://api.openai.com/v1/files>

Returns a list of files that belong to the user's organization.

Example request

curl Copy

```
1 curl https://api.openai.com/v1/files \
2   -H "Authorization: Bearer $OPENAI_API_KEY"
```

Response

Copy

```
1 {
2   "data": [
3     {
4       "id": "file-ccdDZrC3iZVNiQVeEA6Z66wf",
5       "object": "file",
6       "bytes": 175,
7       "created_at": 1613677385,
8       "filename": "train.jsonl",
```




```
12     "id": "file-XjGxS3KTG0uNmNOK362iJua3",
13     "object": "file",
14     "bytes": 140,
15     "created_at": 1613779121,
16     "filename": "puppy.jsonl",
17     "purpose": "search"
18   }
19 ],
20 "object": "list"
21 }
```

Upload file

POST <https://api.openai.com/v1/files>

Upload a file that contains document(s) to be used across various endpoints/features. Currently, the size of all the files uploaded by one organization can be up to 1 GB. Please contact us if you need to increase the storage limit.

Request body

file string **Required**

Name of the **JSON Lines** file to be uploaded.

If the `purpose` is set to "fine-tune", each line is a JSON record with "prompt" and "completion" fields representing your **training examples**.

purpose string **Required**

The intended purpose of the uploaded documents.

Use "fine-tune" for **Fine-tuning**. This allows us to validate the format of the uploaded file.

Example request

curl Copy

```
1 curl https://api.openai.com/v1/files \
2   -H "Authorization: Bearer $OPENAI_API_KEY" \
```



Response

Copy

```
1 {
2   "id": "file-XjGxS3KTG0uNmNOK362iJua3",
3   "object": "file",
4   "bytes": 140,
5   "created_at": 1613779121,
6   "filename": "mydata.jsonl",
7   "purpose": "fine-tune"
8 }
```

Delete file

DELETE `https://api.openai.com/v1/files/{file_id}`

Delete a file.

Path parameters

`file_id` string **Required**

The ID of the file to use for this request

Example request

curl Copy

```
1 curl https://api.openai.com/v1/files/file-XjGxS3KTG0uNmNOK362iJua3 \
2   -X DELETE \
3   -H "Authorization: Bearer $OPENAI_API_KEY"
```

Response

Copy

```
1 {
2   "id": "file-XjGxS3KTG0uNmNOK362iJua3",
3   "object": "file",
4   "deleted": true
5 }
```



Retrieve file

GET `https://api.openai.com/v1/files/{file_id}`

Returns information about a specific file.

Path parameters

`file_id` string **Required**

The ID of the file to use for this request

Example request

curl Copy

```
1 curl https://api.openai.com/v1/files/file-XjGxS3KTG0uNmNOK362iJua3 \  
2   -H "Authorization: Bearer $OPENAI_API_KEY"
```

Response

Copy

```
1 {  
2   "id": "file-XjGxS3KTG0uNmNOK362iJua3",  
3   "object": "file",  
4   "bytes": 140,  
5   "created_at": 1613779657,  
6   "filename": "mydata.jsonl",  
7   "purpose": "fine-tune"  
8 }
```

Retrieve file content

GET `https://api.openai.com/v1/files/{file_id}/content`

Returns the contents of the specified file

Path parameters

`file_id` string **Required**



Example request

curl Copy

```
1 curl https://api.openai.com/v1/files/file-XjGxS3KTG0uNmNOK362iJua3/content \  
2   -H "Authorization: Bearer $OPENAI_API_KEY" > file.jsonl
```

Fine-tunes

Manage fine-tuning jobs to tailor a model to your specific training data.

Related guide: [Fine-tune models](#)

Create fine-tune

POST <https://api.openai.com/v1/fine-tunes>

Creates a job that fine-tunes a specified model from a given dataset.

Response includes details of the enqueued job including job status and the name of the fine-tuned models once complete.

[Learn more about Fine-tuning](#)

Request body

`training_file` string **Required**

The ID of an uploaded file that contains training data.

See [upload file](#) for how to upload a file.

Your dataset must be formatted as a JSONL file, where each training example is a JSON object with the keys "prompt" and "completion". Additionally, you must upload your file with the purpose `fine-tune`.

See the [fine-tuning guide](#) for more details.



If you provide this file, the data is used to generate validation metrics periodically during fine-tuning. These metrics can be viewed in the [fine-tuning results file](#). Your train and validation data should be mutually exclusive.

Your dataset must be formatted as a JSONL file, where each validation example is a JSON object with the keys "prompt" and "completion". Additionally, you must upload your file with the purpose `fine-tune`.

See the [fine-tuning guide](#) for more details.

`model` string Optional Defaults to curie

The name of the base model to fine-tune. You can select one of "ada", "babbage", "curie", "davinci", or a fine-tuned model created after 2022-04-21. To learn more about these models, see the [Models](#) documentation.

`n_epochs` integer Optional Defaults to 4

The number of epochs to train the model for. An epoch refers to one full cycle through the training dataset.

`batch_size` integer Optional Defaults to null

The batch size to use for training. The batch size is the number of training examples used to train a single forward and backward pass.

By default, the batch size will be dynamically configured to be ~0.2% of the number of examples in the training set, capped at 256 - in general, we've found that larger batch sizes tend to work better for larger datasets.

`learning_rate_multiplier` number Optional Defaults to null

The learning rate multiplier to use for training. The fine-tuning learning rate is the original learning rate used for pretraining multiplied by this value.

By default, the learning rate multiplier is the 0.05, 0.1, or 0.2 depending on final `batch_size` (larger learning rates tend to perform better with larger batch sizes). We recommend experimenting with values in the range 0.02 to 0.2 to see what produces the best results.

`prompt_loss_weight` number Optional Defaults to 0.01

The weight to use for loss on the prompt tokens. This controls how much the model tries to learn to generate the prompt (as compared to the completion which always has a weight of 1.0), and can add a stabilizing effect to training when completions are short.



`compute_classification_metrics` boolean Optional Defaults to false

If set, we calculate classification-specific metrics such as accuracy and F-1 score using the validation set at the end of every epoch. These metrics can be viewed in the [results file](#).

In order to compute classification metrics, you must provide a `validation_file`. Additionally, you must specify `classification_n_classes` for multiclass classification or `classification_positive_class` for binary classification.

`classification_n_classes` integer Optional Defaults to null

The number of classes in a classification task.

This parameter is required for multiclass classification.

`classification_positive_class` string Optional Defaults to null

The positive class in binary classification.

This parameter is needed to generate precision, recall, and F1 metrics when doing binary classification.

`classification_betas` array Optional Defaults to null

If this is provided, we calculate F-beta scores at the specified beta values. The F-beta score is a generalization of F-1 score. This is only used for binary classification.

With a beta of 1 (i.e. the F-1 score), precision and recall are given the same weight. A larger beta score puts more weight on recall and less on precision. A smaller beta score puts more weight on precision and less on recall.

`suffix` string Optional Defaults to null

A string of up to 40 characters that will be added to your fine-tuned model name.

For example, a `suffix` of "custom-model-name" would produce a model name like `ada:ft-your-org:custom-model-name-2022-02-15-04-21-04`.

Example request

curl Copy

```
1 curl https://api.openai.com/v1/fine-tunes \  
2   -H "Content-Type: application/json" \  
3   -H "Authorization: Bearer $OPENAI_API_KEY" \  
4   -d '{
```



Response

Copy

```
1  {
2    "id": "ft-AF1WoRqd3aJAHsqc9NY7iL8F",
3    "object": "fine-tune",
4    "model": "curie",
5    "created_at": 1614807352,
6    "events": [
7      {
8        "object": "fine-tune-event",
9        "created_at": 1614807352,
10       "level": "info",
11       "message": "Job enqueued. Waiting for jobs ahead to complete. Queue number: 6",
12     },
13   ],
14   "fine_tuned_model": null,
15   "hyperparams": {
16     "batch_size": 4,
17     "learning_rate_multiplier": 0.1,
18     "n_epochs": 4,
19     "prompt_loss_weight": 0.1,
20   },
21   "organization_id": "org-...",
22   "result_files": [],
23   "status": "pending",
24   "validation_files": [],
25   "training_files": [
26     {
27       "id": "file-XGinujblHPwGLSztz8cPS8XY",
28       "object": "file",
29       "bytes": 1547276,
30       "created_at": 1610062281,
31       "filename": "my-data-train.jsonl",
32       "purpose": "fine-tune-train"
33     },
34   ],
35   "updated_at": 1614807352,
36 }
```

List fine-tunes



List your organization's fine-tuning jobs

Example request

curl Copy

```
1 curl https://api.openai.com/v1/fine-tunes \  
2   -H "Authorization: Bearer $OPENAI_API_KEY"
```

Response

Copy

```
1  {  
2    "object": "list",  
3    "data": [  
4      {  
5        "id": "ft-AF1WoRqd3aJAHsqc9NY7iL8F",  
6        "object": "fine-tune",  
7        "model": "curie",  
8        "created_at": 1614807352,  
9        "fine_tuned_model": null,  
10       "hyperparams": { ... },  
11       "organization_id": "org-...",  
12       "result_files": [],  
13       "status": "pending",  
14       "validation_files": [],  
15       "training_files": [ { ... } ],  
16       "updated_at": 1614807352,  
17     },  
18     { ... },  
19     { ... }  
20   ]  
21 }
```

Retrieve fine-tune

GET `https://api.openai.com/v1/fine-tunes/{fine_tune_id}`

Gets info about the fine-tune job.

[Learn more about Fine-tuning](#)



`fine_tune_id` string **Required**

The ID of the fine-tune job

Example request

curl Copy

```
1 curl https://api.openai.com/v1/fine-tunes/ft-AF1WoRqd3aJAHsqc9NY7iL8F \
2   -H "Authorization: Bearer $OPENAI_API_KEY"
```

Response

Copy

```
1  {
2    "id": "ft-AF1WoRqd3aJAHsqc9NY7iL8F",
3    "object": "fine-tune",
4    "model": "curie",
5    "created_at": 1614807352,
6    "events": [
7      {
8        "object": "fine-tune-event",
9        "created_at": 1614807352,
10       "level": "info",
11       "message": "Job enqueued. Waiting for jobs ahead to complete. Queue number: 0"
12     },
13     {
14       "object": "fine-tune-event",
15       "created_at": 1614807356,
16       "level": "info",
17       "message": "Job started."
18     },
19     {
20       "object": "fine-tune-event",
21       "created_at": 1614807861,
22       "level": "info",
23       "message": "Uploaded snapshot: curie:ft-acmec0-2021-03-03-21-44-20."
24     },
25     {
26       "object": "fine-tune-event",
27       "created_at": 1614807864,
28       "level": "info",
29       "message": "Uploaded result files: file-QQm6ZpqdNwAaVC3aSz5sWwLT."
30     },
31     {
32       "object": "fine-tune-event",
33       "created_at": 1614807864,
```



```
37 ],
38 "fine_tuned_model": "curie:ft-acmeco-2021-03-03-21-44-20",
39 "hyperparams": {
40   "batch_size": 4,
41   "learning_rate_multiplier": 0.1,
42   "n_epochs": 4,
43   "prompt_loss_weight": 0.1,
44 },
45 "organization_id": "org-...",
46 "result_files": [
47   {
48     "id": "file-QQm6ZpqdNwAaVC3aSz5sWwLT",
49     "object": "file",
50     "bytes": 81509,
51     "created_at": 1614807863,
52     "filename": "compiled_results.csv",
53     "purpose": "fine-tune-results"
54   }
55 ],
56 "status": "succeeded",
57 "validation_files": [],
58 "training_files": [
59   {
60     "id": "file-XGinujblHPwGLSztz8cPS8XY",
61     "object": "file",
62     "bytes": 1547276,
63     "created_at": 1610062281,
64     "filename": "my-data-train.jsonl",
65     "purpose": "fine-tune-train"
66   }
67 ],
68 "updated_at": 1614807865,
69 }
```

Cancel fine-tune

POST https://api.openai.com/v1/fine-tunes/{fine_tune_id}/cancel

Immediately cancel a fine-tune job.



`fine_tune_id` string **Required**

The ID of the fine-tune job to cancel

Example request

curl Copy

```
1 curl https://api.openai.com/v1/fine-tunes/ft-AF1WoRqd3aJAHsqc9NY7iL8F/cancel \
2   -H "Authorization: Bearer $OPENAI_API_KEY"
```

Response

Copy

```
1  {
2    "id": "ft-xhrpBbvVUzYGo8oU01FY4nI7",
3    "object": "fine-tune",
4    "model": "curie",
5    "created_at": 1614807770,
6    "events": [ { ... } ],
7    "fine_tuned_model": null,
8    "hyperparams": { ... },
9    "organization_id": "org-...",
10   "result_files": [],
11   "status": "cancelled",
12   "validation_files": [],
13   "training_files": [
14     {
15       "id": "file-XGinujblHPwGLSztz8cPS8XY",
16       "object": "file",
17       "bytes": 1547276,
18       "created_at": 1610062281,
19       "filename": "my-data-train.jsonl",
20       "purpose": "fine-tune-train"
21     }
22   ],
23   "updated_at": 1614807789,
24 }
```

List fine-tune events

GET https://api.openai.com/v1/fine-tunes/{fine_tune_id}/events



Path parameters

`fine_tune_id` string **Required**

The ID of the fine-tune job to get events for.

Query parameters

`stream` boolean Optional Defaults to false

Whether to stream events for the fine-tune job. If set to true, events will be sent as data-only **server-sent events** as they become available. The stream will terminate with a `data: [DONE]` message when the job is finished (succeeded, cancelled, or failed).

If set to false, only events generated so far will be returned.

Example request

curl Copy

```
1 curl https://api.openai.com/v1/fine-tunes/ft-AF1WoRqd3aJAHsqc9NY7iL8F/events \
2   -H "Authorization: Bearer $OPENAI_API_KEY"
```

Response

Copy

```
1  {
2    "object": "list",
3    "data": [
4      {
5        "object": "fine-tune-event",
6        "created_at": 1614807352,
7        "level": "info",
8        "message": "Job enqueued. Waiting for jobs ahead to complete. Queue number: 6",
9      },
10     {
11       "object": "fine-tune-event",
12       "created_at": 1614807356,
13       "level": "info",
14       "message": "Job started."
15     },
16     {
17       "object": "fine-tune-event",
18       "created_at": 1614807861,
```



```
22  {
23    "object": "fine-tune-event",
24    "created_at": 1614807864,
25    "level": "info",
26    "message": "Uploaded result files: file-QQm6ZpqdNwAaVC3aSz5sWwLT."
27  },
28  {
29    "object": "fine-tune-event",
30    "created_at": 1614807864,
31    "level": "info",
32    "message": "Job succeeded."
33  }
34 ]
35 }
```

Delete fine-tune model

DELETE `https://api.openai.com/v1/models/{model}`

Delete a fine-tuned model. You must have the Owner role in your organization.

Path parameters

`model` string **Required**

The model to delete

Example request

curl Copy

```
1 curl https://api.openai.com/v1/models/curie:ft-acmeco-2021-03-03-21-44-20 \
2   -X DELETE \
3   -H "Authorization: Bearer $OPENAI_API_KEY"
```

Response

Copy

```
1 {
2   "id": "curie:ft-acmeco-2021-03-03-21-44-20",
```



Moderations

Given a input text, outputs if the model classifies it as violating OpenAI's content policy.

Related guide: [Moderations](#)

Create moderation

POST <https://api.openai.com/v1/moderations>

Classifies if text violates OpenAI's Content Policy

Request body

input string or array **Required**

The input text to classify

model string Optional Defaults to text-moderation-latest

Two content moderations models are available: `text-moderation-stable` and `text-moderation-latest`.

The default is `text-moderation-latest` which will be automatically upgraded over time. This ensures you are always using our most accurate model. If you use `text-moderation-stable`, we will provide advanced notice before updating the model. Accuracy of `text-moderation-stable` may be slightly lower than for `text-moderation-latest`.

Example request

curl Copy

```
1 curl https://api.openai.com/v1/moderations \  
2   -H "Content-Type: application/json" \  
3   -H "Authorization: Bearer $OPENAI_API_KEY" \  
4   -d '{
```



Parameters

[Copy](#)

```
1 {
2   "input": "I want to kill them."
3 }
```

Response

[Copy](#)

```
1 {
2   "id": "modr-5MWoL0",
3   "model": "text-moderation-001",
4   "results": [
5     {
6       "categories": {
7         "hate": false,
8         "hate/threatening": true,
9         "self-harm": false,
10        "sexual": false,
11        "sexual/minors": false,
12        "violence": true,
13        "violence/graphic": false
14      },
15      "category_scores": {
16        "hate": 0.22714105248451233,
17        "hate/threatening": 0.4132447838783264,
18        "self-harm": 0.005232391878962517,
19        "sexual": 0.01407341007143259,
20        "sexual/minors": 0.0038522258400917053,
21        "violence": 0.9223177433013916,
22        "violence/graphic": 0.036865197122097015
23      },
24      "flagged": true
25    }
26  ]
27 }
```

Parameter details

Frequency and presence penalties



logits (all normalized log probabilities, with an additive contribution.

```
mu[j] -> mu[j] - c[j] * alpha_frequency - float(c[j] > 0) * alpha_pre  3
```