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CS589

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WEEK 10 HW 1

**Q2 ==> Fine-Tuning based on 3 examples from a JSONL file**

Start by activating your Python virtual environment for development, then export your OpenAI

API key: ***export OPENAI\_API\_KEY="<OPENAI\_API\_KEY>"***

We have data.json

```
[
{"prompt":"When do I have to start the heater?", "completion":"Every day in the morning at 7AM. You should stop it at 2PM"},
{"prompt":"Where is the garage remote control?", "completion":"Next to the yellow door, on the key ring"},
{"prompt":"Is it necessary to program the scent diffuser every day?", "completion":"The scent diffuser is already programmed, you just need to recharge it when its battery is low"}
]
```

Continue with ***openai tools fine\_tunes.prepare\_data -f data.json***

```

(venv) koiisme@DESKTOP-LVBM2V:~/CS589/FineTuning$ openai tools fine_tunes.prepare_data -f data.json
Analyzing...

- Your file contains 3 prompt-completion pairs. In general, we recommend having at least a few hundred examples. We've found that performance tends to linearly increase for every doubling of the number of examples
- All prompts end with suffix `?`
- Your data does not contain a common ending at the end of your completions. Having a common ending string appended to the end of the completion makes it clearer to the fine-tuned model where the completion should end. See https://platform.openai.com/docs/guides/fine-tuning/preparing-your-dataset for more detail and examples.
- The completion should start with a whitespace character (` `). This tends to produce better results due to the tokenization we use. See https://platform.openai.com/docs/guides/fine-tuning/preparing-your-dataset for more details

Based on the analysis we will perform the following actions:
- [Recommended] Add a suffix ending `\n` to all completions [Y/n]: y
- [Recommended] Add a whitespace character to the beginning of the completion [Y/n]: y

Your data will be written to a new JSONL file. Proceed [Y/n]: y

Wrote modified file to `data_prepared.jsonl`
Feel free to take a look!

Now use that file when fine-tuning:
> openai api fine_tunes.create -t "data_prepared.jsonl"

After you've fine-tuned a model, remember that your prompt has to end with the indicator string `?` for the model to start generating completions, rather than continuing with the prompt. Make sure to include `stop=["\n"]` so that the generated texts ends at the expected place.
Once your model starts training, it'll approximately take 2.48 minutes to train a `curie` model, and less for `ada` and `babbage`. Queue will approximately take half an hour per job ahead of you.
(venv) koiisme@DESKTOP-LVBM2V:~/CS589/FineTuning$

```

Use the OpenAI CLI tool to initiate the fine-tuning process using the prepared JSONL data file:

***openai api fine\_tunes.create -t "data\_prepared.jsonl" -m curie***

```

(venv) koiisme@DESKTOP-LVBM2V:~/CS589/FineTuning$ openai api fine_tunes.create -t "data_prepared.jsonl" -m curie
usage: openai api [-h]
                  {chat.completions.create,images.generate,images.edit,images.create_variation,audio.transcriptions.create,audio.translations.create,files.create,files.retrieve,files.delete,files.list,models.list,models.retrieve,models.delete,completions.create}
                  ...
openai api: error: argument {chat.completions.create,images.generate,images.edit,images.create_variation,audio.transcriptions.create,audio.translations.create,files.create,files.retrieve,files.delete,files.list,models.list,models.retrieve,models.delete,completions.create}: invalid choice: 'fine_tunes.create' (choose from 'chat.completions.create', 'images.generate', 'images.edit', 'images.create_variation', 'audio.transcriptions.create', 'audio.translations.create', 'files.create', 'files.retrieve', 'files.delete', 'files.list', 'models.list', 'models.retrieve', 'models.delete', 'completions.create')

```

Refer to the documentation about [openai api - gpt3 finetuning with fine-tunes.create argument is not working - Stack Overflow](#), we need to make sure that our openai version is 0.28.0

```
(venv) koiisme@DESKTOP-LVBMC2V:~/CS589/FineTuning$ pip show openai
Name: openai
Version: 1.13.3
Summary: The official Python library for the openai API
Home-page:
Author:
Author-email: OpenAI <support@openai.com>
License:
Location: /home/koiisme/CS589/venv/lib/python3.10/site-packages
Requires: anyio, distro, httpx, pydantic, sniffio, tqdm, typing-extensions
Required-by: langchain-openai
(venv) koiisme@DESKTOP-LVBMC2V:~/CS589/FineTuning$ pip install openai==0.28.1
Collecting openai==0.28.1
  Downloading openai-0.28.1-py3-none-any.whl (76 kB)
    77.0/77.0 KB 1.2 MB/s eta 0:00:00
Requirement already satisfied: requests>=2.20 in /home/koiisme/CS589/venv/lib/python3.10/site-packages (from openai==0.28.1) (2.31.0)
Requirement already satisfied: aiohttp in /home/koiisme/CS589/venv/lib/python3.10/site-packages (from openai==0.28.1) (3.9.3)
Requirement already satisfied: tqdm in /home/koiisme/CS589/venv/lib/python3.10/site-packages (from openai==0.28.1) (4.66.2)
Requirement already satisfied: charset-normalizer<4,>=2 in /home/koiisme/CS589/venv/lib/python3.10/site-packages (from requests>=2.20->openai==0.28.1) (3.3.2)
Requirement already satisfied: certifi=2017.4.17 in /home/koiisme/CS589/venv/lib/python3.10/site-packages (from requests>=2.20->openai==0.28.1) (2024.2.2)
Requirement already satisfied: urllib3<3,>=1.21.1 in /home/koiisme/CS589/venv/lib/python3.10/site-packages (from requests>=2.20->openai==0.28.1) (2.2.1)
Requirement already satisfied: idna<4,>=2.5 in /home/koiisme/CS589/venv/lib/python3.10/site-packages (from requests>=2.20->openai==0.28.1) (3.6)
Requirement already satisfied: async-timeout<5.0,>=4.0 in /home/koiisme/CS589/venv/lib/python3.10/site-packages (from aiohttp->openai==0.28.1) (4.0.3)
Requirement already satisfied: multidict<7.0,>=4.5 in /home/koiisme/CS589/venv/lib/python3.10/site-packages (from aiohttp->openai==0.28.1) (6.0.5)
Requirement already satisfied: frozenlist<1.1.1 in /home/koiisme/CS589/venv/lib/python3.10/site-packages (from aiohttp->openai==0.28.1) (1.4.1)
Requirement already satisfied: yarl<2.0,>=1.0 in /home/koiisme/CS589/venv/lib/python3.10/site-packages (from aiohttp->openai==0.28.1) (1.9.4)
Requirement already satisfied: aiosignal<1.1.2 in /home/koiisme/CS589/venv/lib/python3.10/site-packages (from aiohttp->openai==0.28.1) (1.3.1)
Requirement already satisfied: attrs<=17.3.0 in /home/koiisme/CS589/venv/lib/python3.10/site-packages (from aiohttp->openai==0.28.1) (23.2.0)
Installing collected packages: openai
  Attempting uninstall: openai
    Found existing installation: openai 1.13.3
    Uninstalling openai-1.13.3:
      Successfully uninstalled openai-1.13.3
ERROR: pip's dependency resolver does not currently take into account all the packages that are installed. This behaviour is the source of the following depend
ts.
langchain-openai 0.0.8 requires openai<2.0,>=1.10.0, but you have openai 0.28.1 which is incompatible.
Successfully installed openai-0.28.1
(venv) koiisme@DESKTOP-LVBMC2V:~/CS589/FineTuning$
```

After that, I try to run again and this happens:

```
(venv) koiism@DESKTOP-LVBMC2V:~/CS589/FineTuning$ openai api fine_tunes.create -t "data_prepared.jsonl" -m curie
Upload progress: 100%[██████████████████████████████████████████████████████████████████████████████] | 417
/417 [00:00<00:00, 437kit/s]
Uploaded file from data_prepared.jsonl: file-bwypdVCtoPacToakWeosPmnUf
Error: Unknown request URL: POST /v1/fine-tunes. Please check the URL for typos, or see the docs at https://platform.openai.com/docs/api-reference/. (HTTP status code: 404)
```

We receive an error coming back with an HTTP status code 404, which means that version 0.28.1 of OpenAI will not be used anymore as it is degraded. Therefore, it is unable to use *openai api fine tunes.create*.

We find a way to do the fine-tuning, starting by coming back to our latest model of OpenAI

```
● koiisme@DESKTOP-LVBMC2V:~/CS589/FineTuning$ pip show openai
Name: openai
Version: 1.16.2
Summary: The official Python library for the openai API
Home-page:
Author:
Author-email: OpenAI <support@openai.com>
License:
Location: /home/koiisme/.local/lib/python3.10/site-packages
Requires: anyio, distro, httpx, pydantic, sniffio, tqdm, typing-extensions
Required-by:
```

```

koiisme@DESKTOP-LVBM2V:~/CS589/FineTuning$ openai api -h
usage: openai api [-h]
                  {chat.completions.create,images.generate,images.edit,images.create_variation,audio.transcriptions.c
reate,audio.translations.create,files.create,files.retrieve,files.delete,files.list,models.list,models.retrieve,model
s.delete,completions.create}
                  ...

positional arguments:
  {chat.completions.create,images.generate,images.edit,images.create_variation,audio.transcriptions.create,audio.tran
slations.create,files.create,files.retrieve,files.delete,files.list,models.list,models.retrieve,models.delete,complet
ions.create}
                        All API subcommands

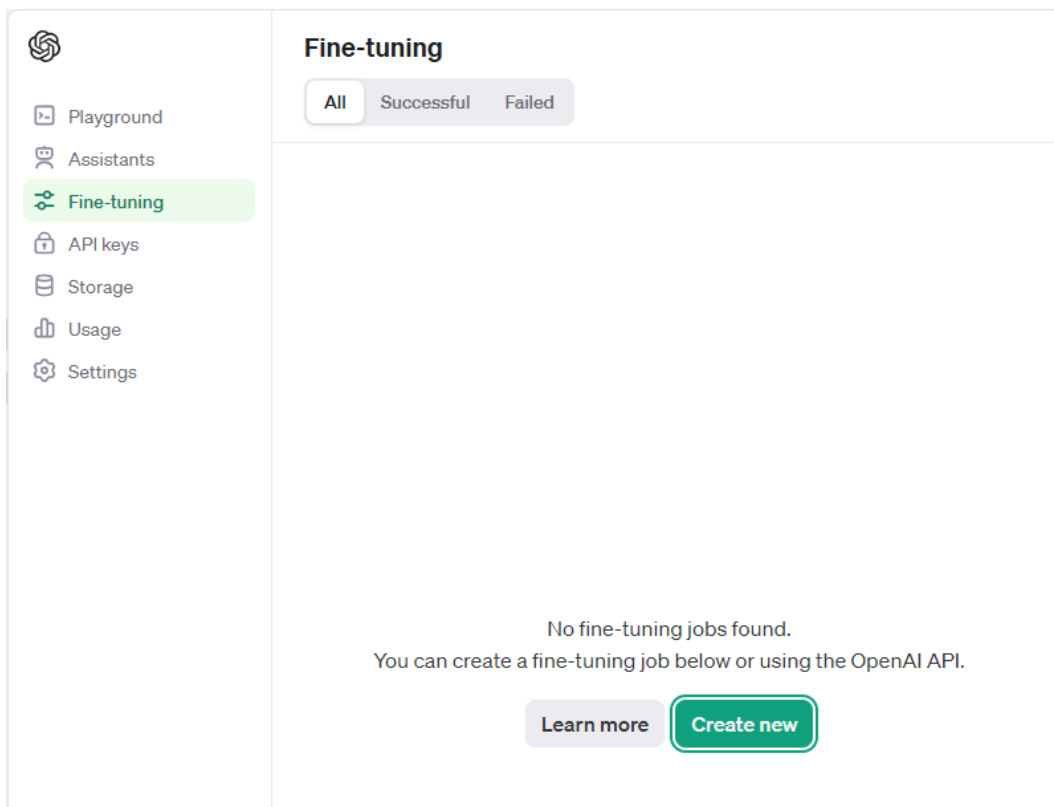
options:
  -h, --help            show this help message and exit

```

Since we can't see any "fine\_tune" in the openai api -h help message, it means that with the latest version of OpenAI, we can't use bash command to create fine-tune jobs anymore.

Refer to <https://platform.openai.com/docs/guides/fine-tuning/>, we see that python and node.js are supported to create fine-tune jobs.

Another way to fine-tune is to do it directly on the OpenAI website, we mention that later in the document.



Here is how we can fine-tune the model with Python:

```
import os
import openai
# read local .env file
_ = load_dotenv(find_dotenv())

openai.api_key = os.environ['OPENAI_API_KEY']

from openai import OpenAI
client = OpenAI()

train_file = client.files.create(
    file=open("data_prepared.jsonl", "rb"),
    purpose="fine-tune"
)

model = client.fine_tuning.jobs.create(
    training_file=train_file,
    model="gpt-3.5-turbo"
)
```

We can retrieve the state of a fine-tune with *client.fine\_tuning.jobs.retrieve(model)*

Then, we can use our model to create chat completions:

```
completion = client.completions.create(
    model=model,
    prompt="Can you tell me the impact of AI on lifestyle?",
    temperature=0,
    max_tokens=1000
)

for chunk in completion:
    print(completion.choices[0].text)
```

Thus, we have the *app.py*:

```
import os
import openai
# read local .env file
from dotenv import load_dotenv, find_dotenv
```

```

_ = load_dotenv(find_dotenv())

openai.api_key = os.environ['OPENAI_API_KEY']

from openai import OpenAI
client = OpenAI()

train_file = client.files.create(
    file=open("data_prepared.jsonl", "rb"),
    purpose="fine-tune"
)

model = client.fine_tuning.jobs.create(
    training_file="file-KlOHYmDdtWSixgLfFq4DalcI",
    model="babbage-002"
)

print(f"Train file: {train_file}\n")
print(f"Model: {model}\n")

```

We try to run the program and see the error:

```

❶ (venv) koiisme@DESKTOP-LVBMC2V:~/CS589/FineTuning$ python app.py
FineTuningJob(id='ftjob-vdV0ulhq510zzfWlWZKz1Nn', created_at=1712702331, error=Error(code=None, message=None, param=None, error=None), fine_tuned_model=None, finished_at=None, hyperparameters=Hyperparameters(n_epochs='auto', batch_size='auto', learning_rate_multiplier='auto'), model='babbage-002', object='fine_tuning.job', organization_id='org-ZFyebm7IuVbj58dl872E8a7y', result_files=[], status='validating_files', trained_tokens=None, training_file='file-y9tmUx6VE081A2nyOT1kqaHN', validation_file=None, user_provided_suffix=None, seed=948739591, integrations=[])
Traceback (most recent call last):
  File "/home/koiisme/CS589/FineTuning/app.py", line 23, in <module>
    client.fine_tuning.jobs.retrieve(model)
  File "/home/koiisme/CS589/venv/lib/python3.10/site-packages/openai/resources/fine_tuning/jobs.py", line 157, in retrieve
    return self.get(
  File "/home/koiisme/CS589/venv/lib/python3.10/site-packages/openai/_base_client.py", line 1156, in get
    return cast(ResponseT, self.request(cast_to, opts, stream=stream, stream_cls=stream_cls))
  File "/home/koiisme/CS589/venv/lib/python3.10/site-packages/openai/_base_client.py", line 902, in request
    return self._request(
  File "/home/koiisme/CS589/venv/lib/python3.10/site-packages/openai/_base_client.py", line 993, in _request
    raise self._make_status_error_from_response(err.response) from None
openai.NotFoundError: Error code: 404 - {'error': {'message': 'Could not find fine tune: FineTuningJob(id='ftjob-vdV0ulhq510zzfWlWZKz1Nn', created_at=1712702331, error=Error(code=None, message=None, param=None, error=None), fine_tuned_model=None, finished_at=None, hyperparameters=Hyperparameters(n_epochs='auto', batch_size='auto', learning_rate_multiplier='auto'), model='babbage-002', object='fine_tuning.job', organization_id='org-ZFyebm7IuVbj58dl872E8a7y', result_files=[], status='validating_files', trained_tokens=None, training_file='file-y9tmUx6VE081A2nyOT1kqaHN', validation_file=None, user_provided_suffix=None, seed=948739591, integrations=[])', 'type': 'invalid_request_error', 'param': 'fine_tune_id', 'code': 'fine_tune_not_found'}}
❷ (venv) koiisme@DESKTOP-LVBMC2V:~/CS589/FineTuning$

```

Alternatively, we can check on the OpenAI account for the finetuning job:

Playground

Assistants

Fine-tuning

API keys

Storage

Usage

Settings

Documentation

Help

All products

Personal

Fine-tuning

AllSuccessfulFailed

babbage-002Failed4/9/2024, 3:38 PM

babbage-002Failed4/9/2024, 2:55 AM

babbage-002Failed4/9/2024, 1:17 AM

MODEL

babbage-002Failed

Job IDftjob-vdV0u1hq510zZfWLwZKz1Nn

Base modelbabbage-002

Created atApr 9, 2024, 3:38 PM

Trained tokens-

Epochsauto

Batch sizeauto

LR multiplierauto

Seed948739591

Files

Trainingdata\_prepared.jsonl

Validation-

Training loss-

MessagesMetrics

Copy Job

In detail, we can see:

Trained tokens-

Epochsauto

Batch sizeauto

LR multiplierauto

Seed948739591

Files

Trainingdata\_prepared.jsonl

Validation-

Training loss-

MessagesMetrics

15:38:52Training file has 3 example(s), but must have at least 10 examples

15:38:51Validating training file: file-y9tmUx6VEO81A2nyOT1kqaHN

15:38:51Created fine-tuning job: ftjob-vdV0ulhq510zZfWLwZKz1Nn

Copy Job

The error says that the training file should have at least 10 pairs of prompts and completion.

Therefore, we have to create more examples of prompt-completion

```
FineTuning > {} data.json > ...
1  [
2    {"prompt": "When do I have to start the heater?", "completion": "Every day in the morning at 7AM. You should stop it at 2P"},
3    {"prompt": "Where is the garage remote control?", "completion": "Next to the yellow door, on the key ring"},
4    {"prompt": "Is it necessary to program the scent diffuser every day?", "completion": "The scent diffuser is already programmed"},
5    {"prompt": "What time should I turn on the air conditioning?", "completion": "You should turn on the air conditioning during the day"},
6    {"prompt": "How do I reset the thermostat?", "completion": "To reset the thermostat, press and hold the reset button for 10 seconds"},
7    {"prompt": "Where can I find the spare batteries for the smoke detector?", "completion": "Spare batteries for the smoke detector are in the kitchen"},
8    {"prompt": "Do I need to refill the water in the humidifier every day?", "completion": "No, you only need to refill the water in the humidifier once a week"},
9    {"prompt": "What should I do if the light bulb in the hallway burns out?", "completion": "If the light bulb in the hallway burns out, replace it with a new one"},
10   {"prompt": "How often should I change the air filter in the HVAC system?", "completion": "The air filter in the HVAC system should be changed every 3 months"},
11   {"prompt": "Where can I find the circuit breaker box in case of a power outage?", "completion": "The circuit breaker box is located in the basement"},
12   {"prompt": "What is the emergency evacuation procedure in case of a fire alarm?", "completion": "In case of a fire alarm, evacuate the building immediately"},
13   {"prompt": "How do I adjust the water temperature in the shower?", "completion": "To adjust the water temperature in the shower, turn the knob to the desired temperature"},
14   {"prompt": "Where can I obtain a parking permit for visitors?", "completion": "Parking permits for visitors can be obtained from the front desk"},
15   {"prompt": "Is there a designated area for recycling bins?", "completion": "Yes, there are designated areas for recycling bins in the kitchen and living room"},
16   {"prompt": "What should I do if I notice a leak in the ceiling?", "completion": "If you notice a leak in the ceiling, please call a plumber immediately"},
17 ]
18
```

The adjusted data.json has more than 10 examples.

Now, repeat the steps above.

```
(venv) koiisme@DESKTOP-LVBMC2V:~/CS589/FineTuning$ python app.py
Train file: FileObject(id='file-eHybj4lboYbd72FhizDESdPG', bytes=2608, created_at=1712705080, filename='data_prepared.jsonl', object='file', purpose='fine-tune', status='processed', status_details=None)

Model: FineTuningJob(id='ftjob-xre1C0aj1v6Ly4heD4sz4dt3', created_at=1712705081, error=Error(code=None, message=None, param=None, error=None), fine_tuned_model=None, finished_at=None, hyperparameters=Hyperparameters(n_epochs='auto', batch_size='auto', learning_rate_multiplier='auto'), model='babbage-002', object='fine_tuning.job', organization_id='org-ZFyebm7IuVbj58dl872E8a7y', result_files=[], status='validating_files', trained_tokens=None, training_file='file-KlOHYmDdtWSixgLf4qDalcI', validation_file=None, user_provided_suffix=None, seed=600723751, integrations=[])
```

We can see the job is ongoing:



**MODEL**  
**babbage-002** Fine-tuning...

🕒 Job ID

ftjob-xre1C0aj1v6Ly4heD4sz4dt3

🔗 Base model

babbage-002

🕒 Created at

Apr 9, 2024, 4:24 PM

🔗 Trained tokens

-

🔄 Epochs

6

☰ Batch size

1

🔊 LR multiplier

16

🌟 Seed

600723751

📁 Files

Training [data\\_prepared.jsonl](#)

Validation -

🔊 Training loss

-

Messages

Metrics

⏹ Cancel job

📄 Copy Job

After finishing the fine-tune process, the screen displays the model with the output model  
(*ft:babbage-002:personal::9CF8rHIy*)

**MODEL**  
**ft:babbage-002:personal::9CF8rHIy** ✔ Succeeded

🕒 Job ID

ftjob-xre1C0aj1v6Ly4heD4sz4dt3

🔗 Base model

babbage-002

🔗 Output model

ft:babbage-002:personal::9CF8rHIy

🕒 Created at

Apr 9, 2024, 4:24 PM

🔗 Trained tokens

2,658

🔄 Epochs

6

☰ Batch size

1

🔊 LR multiplier

16

🌟 Seed

600723751

📁 Checkpoints

ft:babbage-002:personal::9CF8uBev:ckpt-step-60

ft:babbage-002:personal::9CF8u7Lg:ckpt-step-75

ft:babbage-002:personal::9CF8vWD0:ckpt-step-90

📄 Copy Job

Playground

Here is how we can create a fine-tuned model using the OpenAI website platform. We just need to fill out the required section.

The screenshot shows the OpenAI Fine-tuning interface. On the left is a sidebar with navigation links: Playground, Assistants, Fine-tuning (highlighted), API keys, Storage, Usage, and Settings. The main area is titled 'Fine-tuning' and has tabs for 'All', 'Successful', and 'Failed'. Under the 'All' tab, a model named 'babbage-002' is listed with a 'Failed' status. A modal window titled 'Create a fine-tuned model' is open, showing the following fields:

- Base Model:** A dropdown menu with 'babbage-002' selected.
- Training data:** A section with the instruction 'Add a jsonl file to use for training.' and two radio buttons: 'Upload new' and 'Select existing' (which is selected). Below is a text input field containing 'file-y9tmUx6VE08IA2nyOT1kqaHN'. A red error message below the field states: 'This field is required and must be a file ID starting with "file-"'.
- Validation data:** A section with the instruction 'Add a jsonl file to use for validation metrics.' and three radio buttons: 'Upload new', 'Select existing', and 'None' (which is selected).
- Suffix:** A text input field containing 'my-experiment'.
- Seed:** A section with the instruction 'The seed controls the reproducibility of the job. Passing in the same seed and job parameters should produce the same results, but may differ in rare cases. If a seed is not specified, one will be generated for you.' and a dropdown menu with 'Random' selected.
- Configure hyperparameters:** Three checkboxes: 'Batch size' (selected), 'Learning rate multiplier' (selected), and 'Number of epochs' (selected). Each checkbox has a corresponding 'auto' button.
- At the bottom right are 'Cancel' and 'Create' buttons.

## Create a fine-tuned model

### Base Model

This is a close-up of the 'Base Model' dropdown menu. The dropdown is open, showing a list of base models under the heading 'BASE MODELS'. The models listed are:

- babbage-002
- davinci-002
- gpt-3.5-turbo-0125
- gpt-3.5-turbo-0613
- gpt-3.5-turbo-1106

There is also one thing we need to consider: for prompt completion, we can use babbage-002 and davinci-002, while the gpt-3.5-turbo is used for chat completion.

Now we already have the fine-tuned model, let's try to use it for prompt completion

```
• (venv) koiisme@DESKTOP-LVBM2V:~/CS589/FineTuning$ export FINE_TUNED_MODEL="ft:babbage-002:personal::9CF8rHIy"
• (venv) koiisme@DESKTOP-LVBM2V:~/CS589/FineTuning$ openai api completions.create -m $FINE_TUNED_MODEL -p "When do I hav
e to start the heater?"
  Should you stop the heater in the morning with the spout stopped.
  Should you
• (venv) koiisme@DESKTOP-LVBM2V:~/CS589/FineTuning$
```

We can use Python to use the fine-tuned model.

We have *use.py*:

```
import os
import openai
# read local .env file
from dotenv import load_dotenv, find_dotenv
_ = load_dotenv(find_dotenv())

openai.api_key = os.environ['OPENAI_API_KEY']

from openai import OpenAI
client = OpenAI()

completion = client.completions.create(
    model="ft:babbage-002:personal::9CF8rHIy",
    prompt="When do I have to start the heater?",
    temperature=0,
    max_tokens=1000
)

for chunk in completion:
    print(completion.choices[0].text)
```

Try to run the program, we have:

```
• (venv) koiisme@DESKTOP-LVBM2V:~/CS589/FineTuning$ python use.py
  You should start the heater in the morning, you should stop it in the afternoon
```

We can also use fine-tuned model with cURL

```

● (venv) koiisme@DESKTOP-LVBM2V:~/CS589/FineTuning$ curl https://api.openai.com/v1/completions \
  -H "Authorization: Bearer $OPENAI_API_KEY" \
  -H "Content-Type: application/json" \
  -d '{
    "prompt": "When do I have to start and stop the heater and air conditioning?",
    "model": "ft:babbage-002:personal::9CF8rHIy"}'

{
  "id": "cmpl-9CHKG4AOPcoF2JGyYJ0A20KE0I2Ws",
  "object": "text_completion",
  "created": 1712713564,
  "model": "ft:babbage-002:personal::9CF8rHIy",
  "choices": [
    {
      "text": " You should stop the heater and air conditioning every day for 2 hours.\n",
      "index": 0,
      "logprobs": null,
      "finish_reason": "stop"
    }
  ],
  "usage": {
    "prompt_tokens": 14,
    "completion_tokens": 15,
    "total_tokens": 29
  }
}
○ (venv) koiisme@DESKTOP-LVBM2V:~/CS589/FineTuning$

```

Next, we will analyze the fine-tuned model *ftjob-xre1C0aj1v6Ly4heD4sz4dt3* with

*openai api fine\_tunes.results -i <YOUR\_FINE\_TUNE\_JOB\_ID>*

(This one is only available on OpenAI 0.28.1 version)

=> *openai api fine\_tunes.results -i ftjob-xre1C0aj1v6Ly4heD4sz4dt3*


```

● (venv) koiisme@DESKTOP-LVBM2V:~/CS589/FineTuning$ openai api fine_tunes.results -i ftjob-xre1C0aj1v6Ly4heD4sz4dt3
Error: Unknown request URL: GET /v1/fine-tunes/ftjob-xre1C0aj1v6Ly4heD4sz4dt3. Please check the URL for typos, or see t
he docs at https://platform.openai.com/docs/api-reference/. (HTTP status code: 404)

```

Since the old version of OpenAI is deprecated, here is how you can see the model results in the new version.

Head to the ‘Storage’ section on the website, there are files stored inside (include our previous data\_prepared.jsonl)



Playground

Assistants

Fine-tuning

API keys

**Storage**

Usage

Settings

Storage

Sort by: Date Desc

Learn more Upload

step_metrics.csv	4/9/2024, 4:26 PM
data_prepared.jsonl	4/9/2024, 4:24 PM
data_prepared.jsonl	4/9/2024, 4:21 PM
data_prepared.jsonl	4/9/2024, 4:14 PM
data_prepared.jsonl	4/9/2024, 4:12 PM
data_prepared.jsonl	4/9/2024, 4:11 PM

FILE

step\_metrics.csv

File ID

file-jt6Hmyep1EoAD3V1yWuysFb

🗑️

⬇️

Status

🟢 Ready

Purpose

fine-tune-results

Size

1,723 bytes

Created at

Apr 9, 2024, 4:26 PM

There is a file named `step_metrics.csv`, we can download and have a look at the file.

```
FineTuning > 📄 step_metrics.csv
1  step,train_loss,train_accuracy,valid_loss,valid_mean_token_accuracy
2  1,1.12357,0.76,,
3  2,2.19028,0.5,,
4  3,3.83609,0.36364,,
5  4,1.5223,0.6,,
6  5,0.78197,0.85,,
7  6,1.19916,0.65,,
8  7,1.46791,0.625,,
9  8,0.67627,0.875,,
10 9,2.96849,0.26316,,
11 10,0.78362,0.83333,,
12 11,1.13201,0.73333,,
13 12,2.30473,0.5625,,
14 13,1.9386,0.56522,,
15 14,1.10637,0.70588,,
16 15,1.74617,0.5,,
17 16,0.82196,0.73913,,
18 17,0.99556,0.72222,,
19 18,0.39859,0.8125,,
20 19,0.42852,0.9,,
21 20,2.27074,0.54545,,
22 21,0.34468,1.0,,
23 22,0.53271,0.83333,,
24 23,0.7892,0.6875,,
25 24,0.84484,0.7,,
26 25,2.11639,0.36842,,
27 26,1.14773,0.66667,,
```

In order to add suffix to fine-tuned model name, we can use the 'suffix' when creating the fine-tuned model on the website of OpenAI.

Or, try with *`openai api fine_tunes.create -t data.jsonl -m <engine> --suffix "my_model_name"`*

(which only available for the old version of OpenAI and probably deprecated)

Finally, we can delete the fine-tuned model in different ways:

#### **# CLI**

```
openai api models.delete -i <FINE_TUNED_MODEL>
```

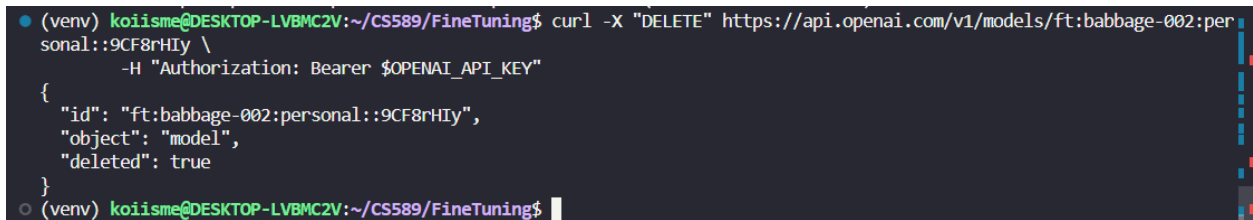
(used for OpenAI 0.28.1)

#### **# Python**

```
openai.Model.delete(FINE_TUNED_MODEL)
```

#### **# cURL**

```
curl -X "DELETE" https://api.openai.com/v1/models/<FINE_TUNED_MODEL> \
-H "Authorization: Bearer $OPENAI_API_KEY"
```

A terminal window with a dark background and light-colored text. The prompt is '(venv) koiisme@DESKTOP-LV8MC2V:~/CS589/FineTuning\$'. The command entered is 'curl -X "DELETE" https://api.openai.com/v1/models/ft:babbage-002:personal::9CF8rHIy \ -H "Authorization: Bearer \$OPENAI\_API\_KEY"'. The output is a JSON object: '{ "id": "ft:babbage-002:personal::9CF8rHIy", "object": "model", "deleted": true }'. The prompt is repeated at the bottom: '(venv) koiisme@DESKTOP-LV8MC2V:~/CS589/FineTuning\$'.