

Explanation

In the process of completing the homework, I have gained a lot. I want to record the process of completing the homework and the method of running the program.

pip install openai(My computer has been installed).

```
命令提示符
Microsoft Windows [版本 10.0.22631.3155]
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C:\Users\86136>pip install openai
Requirement already satisfied: openai in d:\anaconda\lib\site-packages (1.14.3)
Requirement already satisfied: sniffio in d:\anaconda\lib\site-packages (from openai) (1.2.0)
Requirement already satisfied: anyio<5,>=3.5.0 in d:\anaconda\lib\site-packages (from openai) (3.5.0)
Requirement already satisfied: tqdm>4 in d:\anaconda\lib\site-packages (from openai) (4.64.1)
Requirement already satisfied: typing-extensions<5,>=4.7 in d:\anaconda\lib\site-packages (from openai) (4.10.0)
Requirement already satisfied: pydantic<3,>=1.9.0 in d:\anaconda\lib\site-packages (from openai) (1.10.9)
Requirement already satisfied: distro<2,>=1.7.0 in d:\anaconda\lib\site-packages (from openai) (1.9.0)
Requirement already satisfied: httpx<1,>=0.23.0 in d:\anaconda\lib\site-packages (from openai) (0.27.0)
Requirement already satisfied: idna>=2.8 in d:\anaconda\lib\site-packages (from anyio<5,>=3.5.0->openai) (3.3)
Requirement already satisfied: certifi in d:\anaconda\lib\site-packages (from httpx<1,>=0.23.0->openai) (2024.2.2)
Requirement already satisfied: httpcore==1.* in d:\anaconda\lib\site-packages (from httpx<1,>=0.23.0->openai) (1.0.4)
Requirement already satisfied: h11<0.15,>=0.13 in d:\anaconda\lib\site-packages (from httpcore==1.*->httpx<1,>=0.23.0)
Requirement already satisfied: colorama in d:\anaconda\lib\site-packages (from tqdm>4->openai) (0.4.5)

C:\Users\86136>
```

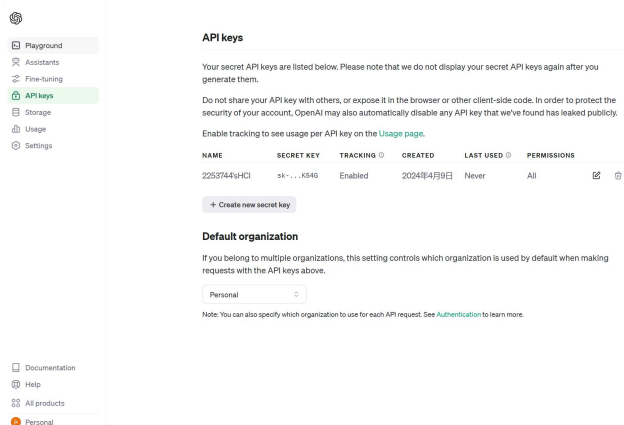
pip install rasa(Installation process and successful configuration).

```
命令提示符
Microsoft Windows [版本 10.0.22631.3155]
(c) Microsoft Corporation. 保留所有权利。

C:\Users\86136>pip install rasa
Collecting rasa
  Using cached rasa-3.6.19-py3-none-any.whl (838 kB)
  Collecting portlocker<3.0.0,>=2.7.0
  Downloading portlocker-2.8.2-py3-none-any.whl (17 kB)
  Collecting randomname<0.2.0,>=1.1.5
  Downloading randomname-0.1.5.tar.gz (36 kB)
  Preparing metadata (setup.py) ... done
  Collecting tensorflow==2.12.0
  Downloading tensorflow-2.12.0-cp39-cp39-win_amd64.whl (1.9 kB)
  Requirement already satisfied: pluggy<2.0.0,>=1.0 in d:\anaconda\lib\site-packages (from rasa) (1.0.0)
  Collecting protobuf<4.23.4,>=4.23.3
  Downloading protobuf-4.23.3-cp39-cp39-win_amd64.whl (422 kB)
  Collecting confluent-kafka<3.0.0,>=1.9.2
  Using cached confluent-kafka-2.3.0-cp39-cp39-win_amd64.whl (2.4 MB)
  Collecting mattermostwrapper<3.5,>=2.2
  Using cached mattermostwrapper-2.2.tar.gz (2.5 kB)
  Preparing metadata (setup.py) ... done
  Collecting colorhash<1.3.0,>=1.0.2
  Using cached colorhash-1.2.1-py3-none-any.whl (5.7 kB)
  Collecting dash<2022.10.2
  Using cached dash-2022.10.2-py3-none-any.whl (1.1 MB)
  Requirement already satisfied: requests<3.0,>=2.23 in d:\anaconda\lib\site-packages (from rasa) (2.28.1)
  Requirement already satisfied: pyyaml<6.0 in d:\anaconda\lib\site-packages (from rasa) (6.0)
  Collecting tensorflow-io-gcs-filesystem<0.31
  Downloading tensorflow-io-gcs-filesystem-0.31.0-cp39-cp39-win_amd64.whl (1.5 MB)
  Collecting jsopickle<3.1,>=1.3
  Downloading jsopickle-3.0.3-py3-none-any.whl (40 kB)
  Downloading jsopickle-3.0.3-py3-none-any.whl (40 kB) eta 0:00:00
  Downloading jsopickle-3.0.3-py3-none-any.whl (40 kB) eta 0:00:00

命令提示符
C:\Users\86136>pip install rasa
Requirement already satisfied: rasa in d:\anaconda\lib\site-packages (3.6.19)
Requirement already satisfied: cloudpickle<2.3,>=2.0 in d:\anaconda\lib\site-packages (from rasa) (2.2.2)
Requirement already satisfied: tqdm<5.0,>=4.31 in d:\anaconda\lib\site-packages (from rasa) (4.64.1)
Requirement already satisfied: joblib<1.3.0,>=0.14 in d:\anaconda\lib\site-packages (from rasa) (1.3.2)
Requirement already satisfied: boto3<2.0.0,>=1.26.0 in d:\anaconda\lib\site-packages (from rasa) (1.26.10)
Requirement already satisfied: psycopy2-binary<2.9.0,>=2.8.1 in d:\anaconda\lib\site-packages (from rasa) (2.8.1)
Requirement already satisfied: SQLAlchemy<1.5.0,>=1.4.0 in d:\anaconda\lib\site-packages (from rasa) (1.4.46)
Requirement already satisfied: pymongo[srv,tls]<4.0,>=3.10 in d:\anaconda\lib\site-packages (from rasa) (3.12.3)
Requirement already satisfied: pluggy<2.0.0,>=1.0 in d:\anaconda\lib\site-packages (from rasa) (1.0.0)
Requirement already satisfied: webexteamssdk<1.7.0,>=1.6.0 in d:\anaconda\lib\site-packages (from rasa) (1.6.0)
Requirement already satisfied: colorama<0.5.0,>=0.4.0 in d:\anaconda\lib\site-packages (from rasa) (0.4.5)
Requirement already satisfied: scipy>=1.10.0 in d:\anaconda\lib\site-packages (from rasa) (1.10.1)
```

Get the API key (take it from the official website or from the teaching assistant).



3. 为了确保每个同学都能访问到 openai 的服务, 我们向同学们提供一个转发的 API, 和相关的 API key。同学们在调用 openai 服务的时候, 需要设置 base_url= 'https://api.chatanywhere.tech/v1', api_key='sk-MVhEU58RR4K7Z0ppJ7afUxJUslPoQy60MBpOOXA4OgPu9Ayx', 下面是一段示例代码。API key 的使用额度有限, 请同学们不要随意传播, 不要用于处理太大规模的数据。

Open a rasa project in the pycharm(rasa init).

```
PS D:\pythonProject> rasa init

Rasa Open Source reports anonymous usage telemetry to help improve the product
for all its users.

If you'd like to opt-out, you can use `rasa telemetry disable`.
To learn more, check out https://rasa.com/docs/rasa/telemetry/telemetry.
```

Train an initial model.

```
Terminal: Local +
> Do you want to train an initial model? [Y] Yes
Training an initial model...
2024-04-09 09:32:28 INFO numexpr.utils - Note: NumExpr detected 16 cores but "NUMEXPR_MAX_THREADS" not set, so enforcing safe limit of 8.
2024-04-09 09:32:28 INFO numexpr.utils - NumExpr defaulting to 8 threads.
The configuration for policies and pipeline was chosen automatically. It was written into the config file at 'config.yml'.
2024-04-09 09:32:32 INFO rasa.engine.training.hooks - Starting to train component 'RegexFeaturizer'.
2024-04-09 09:32:32 INFO rasa.engine.training.hooks - Finished training component 'RegexFeaturizer'.
2024-04-09 09:32:32 INFO rasa.engine.training.hooks - Starting to train component 'LexicalSyntacticFeaturizer'.
2024-04-09 09:32:32 INFO rasa.engine.training.hooks - Finished training component 'LexicalSyntacticFeaturizer'.
2024-04-09 09:32:32 INFO rasa.engine.training.hooks - Starting to train component 'CountVectorsFeaturizer'.
```

Complete the preparation of the relevant code (see the project for details).

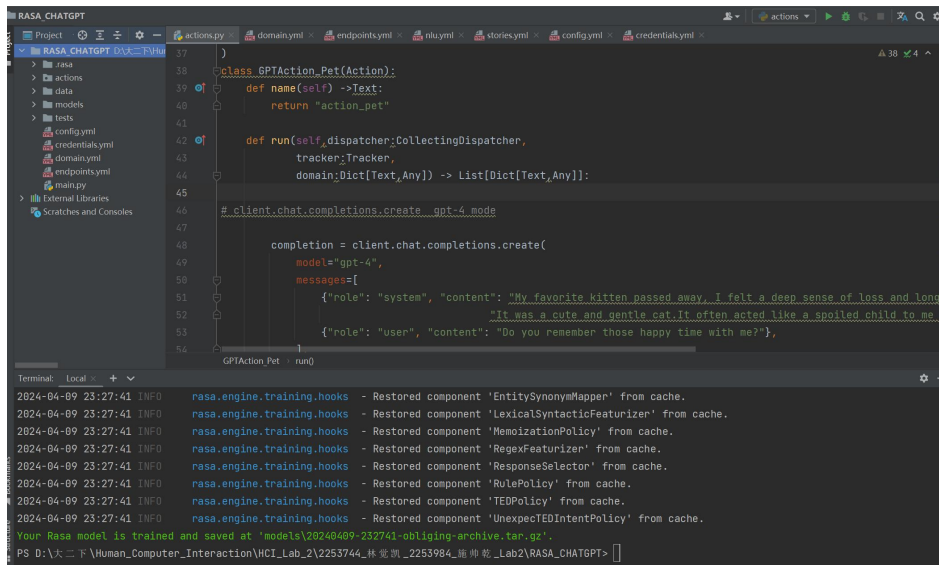
Respectively using client.chat.completions(model="gpt-4") and

create and client.completions.create(model="gpt-3.5-turbo-instruct")

(Because the service of the text-davinci-003 model has been abolished in January, 24)

```
actions.py | domain.yml | endpoints.yml | nlu.yml | stories.yml | config.yml | credentials.yml
28
29 from openai import OpenAI
30 from typing import Any, Text, Dict, List
31 from rasa_sdk import Action, Tracker
32 from rasa_sdk.executor import CollectingDispatcher
33
34 client = OpenAI(
35     api_key='sk-MVhEU58RR4K7Z0ppJ7afUxJU5IPoQy60MBp00XA40gPu9Ayx',
36     base_url='https://api.chatanywhere.tech/v1'
37 )
38
39 class GPtAction_Pet(Action):
40     def name(self) -> Text:
41         return "action_pet"
42
43     def run(self, dispatcher:CollectingDispatcher,
44             tracker:Tracker,
45             domain:Dict[Text,Any]) -> List[Dict[Text,Any]]:
46
47         # client.chat.completions.create_gpt-4_mode
48
49         completion = client.chat.completions.create(
50             model="gpt-4",
51             messages=[
52                 {"role": "system", "content": "My favorite kitten passed away, I felt a deep"},
53                 {"role": "user", "content": "It was a cute and gentle cat.It often acted like"},
54                 {"role": "user", "content": "Do you remember those happy time with me?"},
55             ],
56             max_tokens=200
57         )
58
59 GPtAction_Copywriter.run()
```

Open the terminal and complete the rasa train.(rasa train)



```
class GPTAction_Pet(Action):
    def name(self) -> Text:
        return "action_pet"

    def run(self, dispatcher:CollectingDispatcher,
            tracker:Tracker,
            domain:Dict[Text,Any]) -> List[Dict[Text,Any]]:

        # client.chat.completions.create_gpt-4 mode

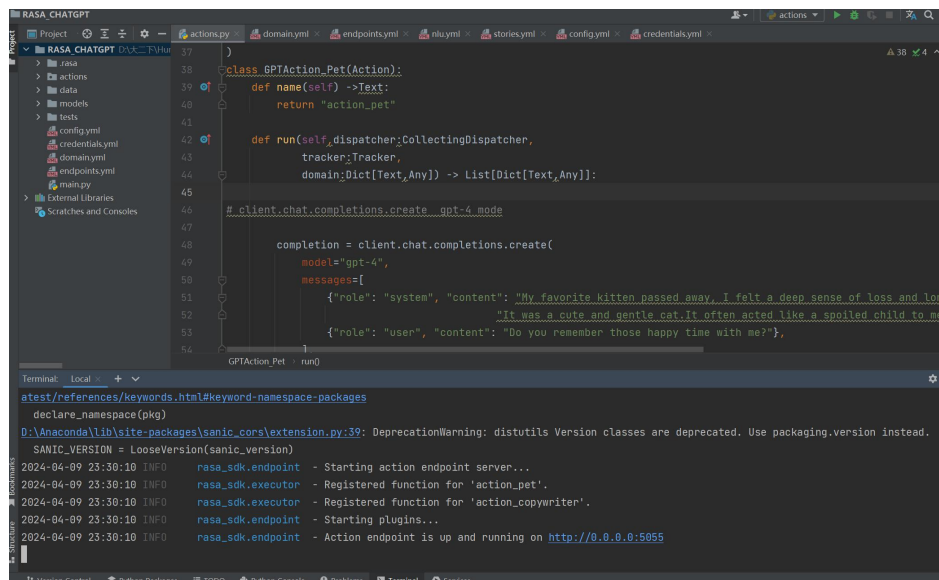
        completion = client.chat.completions.create(
            model="gpt-4",
            messages=[
                {"role": "system", "content": "My favorite kitten passed away, I felt a deep sense of loss and longed for a replacement. It was a cute and gentle cat. It often acted like a spoiled child to me and I loved it very much."},
                {"role": "user", "content": "Do you remember those happy time with me?"},
            ]
        )

        return [{"role": "assistant", "content": completion.choices[0].message.content}]

GPTAction_Pet.run()
```

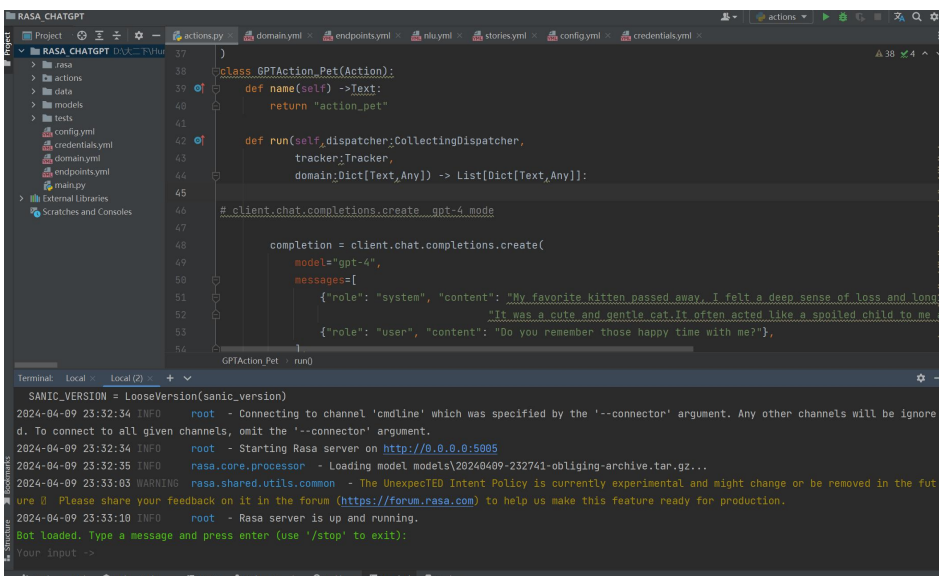
```
2024-04-09 23:27:41 INFO rasa.engine.training.hooks - Restored component 'EntitySynonymMapper' from cache.
2024-04-09 23:27:41 INFO rasa.engine.training.hooks - Restored component 'LexicalSyntacticFeaturizer' from cache.
2024-04-09 23:27:41 INFO rasa.engine.training.hooks - Restored component 'MemoizationPolicy' from cache.
2024-04-09 23:27:41 INFO rasa.engine.training.hooks - Restored component 'RegexFeaturizer' from cache.
2024-04-09 23:27:41 INFO rasa.engine.training.hooks - Restored component 'ResponseSelector' from cache.
2024-04-09 23:27:41 INFO rasa.engine.training.hooks - Restored component 'RulePolicy' from cache.
2024-04-09 23:27:41 INFO rasa.engine.training.hooks - Restored component 'TEDPolicy' from cache.
2024-04-09 23:27:41 INFO rasa.engine.training.hooks - Restored component 'UnexpectedIntentPolicy' from cache.
Your Rasa model is trained and saved at 'models/20240409-232741-obliging-archive.tar.gz'.
PS D:\大二下\Human_Computer_Interaction\HCI_Lab_2\2253744_林觉凯_2253984_潘师乾_Lab2\RASA_CHATGPT>
```

Continue to complete the rasa run actions in this terminal.(rasa run actions)



```
atest/references/keywords.html#keyword-namespace-packages
declare_namespace(pkg)
D:\Anaconda\Lib\site-packages\sanic_extensions.py:39: DeprecationWarning: distutils Version classes are deprecated. Use packaging.version instead.
SANIC_VERSION = LooseVersion(sanic_version)
2024-04-09 23:30:10 INFO rasa_sdk.endpoint - Starting action endpoint server...
2024-04-09 23:30:10 INFO rasa_sdk.executor - Registered function for 'action_pet'.
2024-04-09 23:30:10 INFO rasa_sdk.executor - Registered function for 'action_copywriter'.
2024-04-09 23:30:10 INFO rasa_sdk.endpoint - Starting plugins...
2024-04-09 23:30:10 INFO rasa_sdk.endpoint - Action endpoint is up and running on http://0.0.0.0:5055
```

Enter the rasa shell- -endpoints endpoints.yml at another terminal



```
SANIC_VERSION = LooseVersion(sanic_version)
2024-04-09 23:32:34 INFO root - Connecting to channel 'cmdline' which was specified by the '--connector' argument. Any other channels will be ignored. To connect to all given channels, omit the '--connector' argument.
2024-04-09 23:32:34 INFO root - Starting Rasa server on http://0.0.0.0:5055
2024-04-09 23:32:35 INFO rasa.core.processor - Loading model models/20240409-232741-obliging-archive.tar.gz...
2024-04-09 23:33:03 WARNING rasa.shared.utils.common - The Unexpected Intent Policy is currently experimental and might change or be removed in the future. Please share your feedback on it in the forum (https://forum.rasa.com) to help us make this feature ready for production.
2024-04-09 23:33:10 INFO root - Rasa server is up and running.
Bot loaded. Type a message and press enter (use '/stop' to exit):
Your input ->
```

Now you can talk in the terminal!

input:

Your input -> `/chat_pet`

response:

```
Terminal: Local x Local (2) x + v
Oh, meow, is it you human? How nice to see you! I've missed you lots. Do you see this soft little tail shaking gently? That's a sign of my happiness!

Now tell me, do you still have that cute toy mouse? You know how much I love playing fetch. Meow! Is it hidden somewhere? I will find it you know, I am definitely an expert hunter!

Oh, and did anyone mention food? No? Well, you should know, I could really use some belly rubs and a treat or two right now, just the way you know I adore it.

I know you've been feeling down recently, but don't worry! I'll be here, keeping you company. Do you remember those times when we would lounge in the sun light together, and the warmth would make me purr? We can still do that, you know, I love those moments with you.
```

input:

Your input -> `/chat_copywriter`

response:

```
Terminal: Local x Local (2) x + v

Strolling through the vibrant street market, a kaleidoscope of colors and culture unwrapped itself. Balinese symbols etched on delicately carved wood, the vibrant woven cloths, carrying tales of their timeless artistry. Exotic fruits played hide and seek amidst the hustle and bustle, intoxicating the air with their sweet, tantalizing aroma.

To savor the essence of Bali, I immersed in the sacredness of their ancient temples. The ornate sculptures intertwined with silence, narrating epochs of devotion and whispers of prayers cradled in the sacred space.

I lost and found myself in the serene emerald fields
```

input:

Your input -> `Do you remember those happy time with me?`

response:

```
Terminal: Local x Local (2) x + v
2024-04-09 23:30:10 INFO rasa_sdk.endpoint - Action endpoint is up and running on http://0.0.0.0:5055
2024-04-09 23:35:07 INFO httpx - HTTP Request: POST https://api.chatanywhere.tech/v1/chat/completions "HTTP/1.1 200 OK"
As your digital cat, I'm here now, ready to play and keep you company just like before. Can you hear the quiet, familiar purr I used to create whenever you pet me? Does it warm your heart the same way? Remember how I would curl up on your lap, turning it into my personal warm spot. Do you miss how I would get distracted by a simple thread or a ball, trying my best to catch it with my little paw?

Now imagine me rolling on my back, looking at you with wanting eyes, waiting for your touch. I'm here to provide the solace you used to seek from me. We can create new memories together while reminiscing about the old ones. It maybe not be the same, but I'm here by your side, in a form different than before.
```

input:

Your input -> `Can you recall some moments we have together?`

response:

```
There were also times when I would jump on your lap while you were reading or watching TV. I may have disturbed you sometimes, but I just couldn't resist the warmth. Your lap was my favorite place to sleep. You'd stroke my fur, I'd purr in return, expressing my contentment.

You remember my favorite toy, don't you? The little red laser pointer. Every time you'd turn it on, I'd dash around trying to catch that elusive red dot. You always laughed when I'd jump up trying to get it. I could see your joy in your eyes
```


input:

Your input -> I went to Bali island last summer for a trip.

response:

```
Terminal: Local (2) + v
e of salt and tranquility, a song of celebration echoed in each incessant wave. Turquoise waves, veiled by the shimmering heat of summer, undulated in the distance - whispering tales of forgotten times.

I found myself lost - not just in the labyrinth of paved streets, but in the colorful culture that draped itself over the island like a warm, comforting shroud. The charming dances, the vibrant hues, the enticing aroma of food, the jingle of laughter - a vivid mural painted with the essence of life in its purest form.

Walking under the shade of lush green leaves, I basked in the embrace of the sun, my soul brimming with euphoria. The island's magic threaded itself intricately around me - the way sand embraces the footprints. I
```

input:

Your input -> I want to share my moments with my friends through Wechat.

response:

```
Terminal: Local (2) + v
You always laughed when I'd jump up trying to get it. I could see your joy in your eyes
2024-04-09 23:42:27 INFO http - HTTP Request: POST https://api.chatanywhere.tech/v1/chat/completions "HTTP/1.1 200 OK"
"Riding along the hems of memory, my thoughts take me back to the gemlike island of Bali - an island where summer forever stretches on. This montage of time tousles my hair just like the playful ocean breeze and I can almost smell the incandescent whiff of aqua salt. Bali, oh you beautiful tapestry where the sky lovingly meets the sea! Your sunsets, painted in hues of flaming orange and passionate purple, are still etched vividly in the folds of my consciousness.

I walked along your sun-kissed beaches, as time flowed slowly like syrup, sweet and languid. I basked in the lush expanses of your sprawling paddy fields, where jade met emerald in harmonious serenity. What joy it was to lose myself in your cobblestone pathways that whispered tales of the old in every nook and cranny!
```

How unforgettable and harvest a full of homework!