

QuickStart ChatGPT



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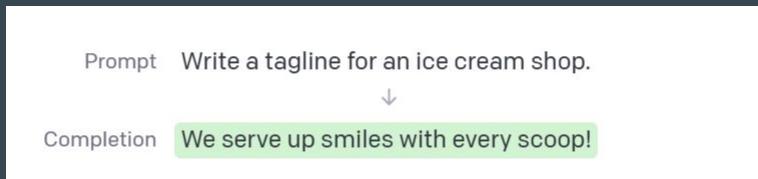
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INTRODUCTION

The OpenAI API can be applied to virtually any task that involves understanding or generating natural language or code. It offers a spectrum of models with different levels of power suitable for different tasks, as well as the ability to fine-tune your own custom models. These models can be used for everything from content generation to semantic search and classification.

The Completion endpoint is the core of our API and provides a simple interface that's extremely flexible and powerful. You input some text as a prompt, and the API will return a text completion that attempts to match whatever instructions or context you gave it. **It's a very advanced autocomplete — the model processes your text prompt and tries to predict what's most likely to come next.**



Quickstart

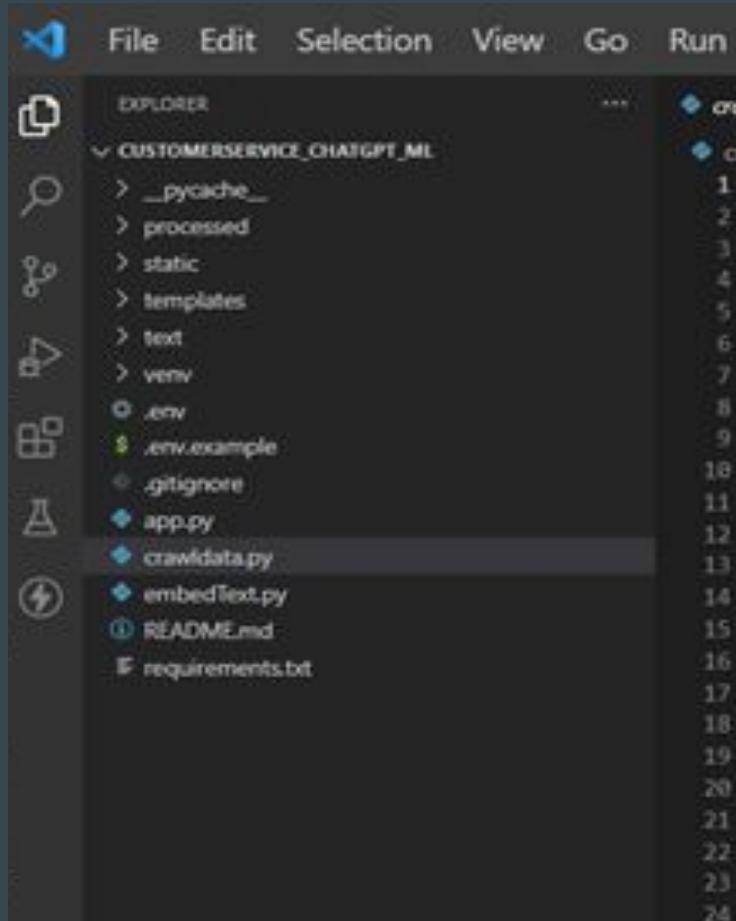
OpenAI has trained cutting-edge language models that are very good at understanding and generating text. Our API provides access to these models and can be used to solve virtually any task that involves processing language.

In this quickstart tutorial, you'll build a simple sample application. Along the way, you'll learn key concepts and techniques that are fundamental to using the API for any task, including:

- Content generation
- Summarization
- Classification, categorization, and sentiment analysis
- Data extraction
- Translation
- Many more!

Implementation:

Project Structure →



Implementation

Python is used as the main programming language along with the OpenAI, Pandas, transformers, NumPy, and other popular packages.

Setup:Python Flask

If you don't have Python installed, [install it from here](#). To start with the code, clone the [full code for this tutorial on GitHub](#).

```
fatemanagori@DESKTOP-GLUEUI: ~  
mygcpkey mygcpkey.pub  
fatemanagori@DESKTOP-GLUEUI:~$ git clone https://github.com/openai/openai-cookbook.git  
Cloning into 'openai-cookbook'...  
remote: Enumerating objects: 1586, done.  
remote: Counting objects: 100% (138/138), done.  
remote: Compressing objects: 100% (100/100), done.  
remote: Total 1586 (delta 60), reused 87 (delta 37), pack-reused 1448  
Receiving objects: 100% (1586/1586), 90.46 MiB | 6.40 MiB/s, done.  
Resolving deltas: 100% (828/828), done.  
Updating files: 100% (219/219), done.  
fatemanagori@DESKTOP-GLUEUI:~$ mv openai-cookbook CustomerService_ChatGPT_ML  
fatemanagori@DESKTOP-GLUEUI:~$ ls  
CustomerService_ChatGPT_ML mygcpkey mygcpkey.pub  
fatemanagori@DESKTOP-GLUEUI:~$
```

Add your API key

Navigate into the project directory and make a copy of the example environment variables file.

```
cd CustomerService_ChatGPT_ML  
cp .env.example .env
```

You can create you API_KEY from

<https://platform.openai.com/docs/quickstart/build-your-application>

```
fatemanageri@DESKTOP-GLUEUI:~/CustomerService_ChatGPT_ML$ ls  
README.md app.py crawlData.py embedText.py processed requirements.txt static templates text  
fatemanageri@DESKTOP-GLUEUI:~/CustomerService_ChatGPT_ML$ cp .env.example .env  
fatemanageri@DESKTOP-GLUEUI:~/CustomerService_ChatGPT_ML$ vi .env
```

Create a secret key

Copy your secret **API** key and set it as the **OPENAI_API_KEY** in your newly created .env file.

```
C: > Users > FATEMANAGORI > openai-quickstart-python > ⚙ .env
1  FLASK_APP=app
2  FLASK_ENV=development
3
4  # Once you add your API key below, make sure to not share it with anyone! Th
5  OPENAI_API_KEY= ****SET YOUR SECRET KEY HERE*****
```

Install Dependencies

Run the following commands in the project directory to install the dependencies and run the app. When running the commands, you may need to type python3/pip3 instead of python/pip depending on your setup.

1. Install virtualenv using pip:
2. pip install -r requirements.txt

```
fatemanager@DESKTOP-GLUEUFI:~/CustomerService_ChatGPT_ML$ pip install -r requirements.txt
Defaulting to user installation because normal site-packages is not writeable
Collecting autopep8==1.6.0
  Using cached autopep8-1.6.0-py2.py3-none-any.whl (45 kB)
Collecting aiohttp==3.8.3
  Using cached aiohttp-3.8.3-cp310-cp310-manylinux_2_17_x86_64.manylinux2014_x86_64.whl (1.0 MB)
Collecting aiosignal==1.3.1
  Using cached aiosignal-1.3.1-py3-none-any.whl (7.6 kB)
Requirement already satisfied: appnope==0.1.3 in /home/fatemanager/.local/lib/python3.10/site-packages (from -r requirements.txt (line 4)) (0.1.3)
Requirement already satisfied: asttokens==2.2.1 in /home/fatemanager/.local/lib/python3.10/site-packages (from -r requirements.txt (line 5)) (2.2.1)
Requirement already satisfied: async-timeout==4.0.2 in /home/fatemanager/.local/lib/python3.10/site-packages (from -r requirements.txt (line 6)) (4.0.2)
Requirement already satisfied: attrs==22.2.0 in /home/fatemanager/.local/lib/python3.10/site-packages (from -r requirements.txt (line 7)) (22.2.0)
Requirement already satisfied: backcall==0.2.0 in /home/fatemanager/.local/lib/python3.10/site-packages (from -r requirements.txt (line 8)) (0.2.0)
Collecting beautifulsoup4==4.11.1
  Using cached beautifulsoup4-4.11.1-py3-none-any.whl (128 kB)
Collecting blobfile==2.0.1
  Using cached blobfile-2.0.1-py3-none-any.whl (73 kB)
```

Install Dependencies

3. Pip install --upgrade setuptools

```
fatemanageri@DESKTOP-GLUEUF1:~/CustomerService_ChatGPT_ML$ pip install --upgrade setuptools
Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: setuptools in /usr/lib/python3/dist-packages (59.6.0)
Collecting setuptools
  Using cached setuptools-67.6.1-py3-none-any.whl (1.1 MB)
Installing collected packages: setuptools
Successfully installed setuptools-67.6.1
```

Create Virtual Environment

Activate the virtual environment and and set the path of virtual environments bin directory

- Pip install virtualenv
- Pip install virtualenvwrapper-win
- Python3 -m venv venv
- Source ~/CustomerService_ChatGPT_ML/venv/bin/activate

```
fatemanageri@DESKTOP-GLUEUI:~/CustomerService_ChatGPT_ML$ pip install virtualenv
Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: virtualenv in /home/fatemanageri/.local/lib/python3.10/site-packages (20.20.0)
Requirement already satisfied: platformdirs<4,>=2.4 in /home/fatemanageri/.local/lib/python3.10/site-packages (from virtualenv) (2.6.2)
Requirement already satisfied: filelock<4,>=3.4.1 in /home/fatemanageri/.local/lib/python3.10/site-packages (from virtualenv) (3.9.0)
Requirement already satisfied: distlib<1,>=0.3.6 in /home/fatemanageri/.local/lib/python3.10/site-packages (from virtualenv) (0.3.6)
fatemanageri@DESKTOP-GLUEUI:~/CustomerService_ChatGPT_ML$ pip install virtualenvwrapper-win
Defaulting to user installation because normal site-packages is not writeable
Requirement already satisfied: virtualenvwrapper-win in /home/fatemanageri/.local/lib/python3.10/site-packages (1.2.7)
Requirement already satisfied: virtualenv in /home/fatemanageri/.local/lib/python3.10/site-packages (from virtualenvwrapper-win) (20.20.0)
Requirement already satisfied: distlib<1,>=0.3.6 in /home/fatemanageri/.local/lib/python3.10/site-packages (from virtualenv->virtualenvwrapper-win) (0.3.6)
Requirement already satisfied: platformdirs<4,>=2.4 in /home/fatemanageri/.local/lib/python3.10/site-packages (from virtualenv->virtualenvwrapper-win) (2.6.2)
Requirement already satisfied: filelock<4,>=3.4.1 in /home/fatemanageri/.local/lib/python3.10/site-packages (from virtualenv->virtualenvwrapper-win) (3.9.0)
fatemanageri@DESKTOP-GLUEUI:~/CustomerService_ChatGPT_ML$ python3 -m venv venv
venv/Scripts/activate: command not found
fatemanageri@DESKTOP-GLUEUI:~/CustomerService_ChatGPT_ML$ source ~/CustomerService_ChatGPT_ML/venv/bin/activate
(venv) fatemanageri@DESKTOP-GLUEUI:~/CustomerService_ChatGPT_ML$ python3 embedText.py
Traceback (most recent call last):
```

Run the Application: Crawl Data

python3 crawldata.py

```
(venv) fatemanagori@DESKTOP-GLUEUI:~/CustomerService_ChatGPT_ML$ vi crawldata.py
(venv) fatemanagori@DESKTOP-GLUEUI:~/CustomerService_ChatGPT_ML$ python3 crawldata.py
https://openai.com/
https://openai.com/research/point-e
https://openai.com/research?models=point-e
https://openai.com/research?topics=reasoning
https://openai.com/research/critiques
https://openai.com/blog/learning-to-summarize-with-human-feedback
https://openai.com/blog/learning-to-summarize-with-human-feedback/#rf20
https://openai.com/research?authors=paul-christiano
https://openai.com/blog/openai-baselines-ppo
https://openai.com/research/openai-baselines-ppo#content
https://openai.com/research?authors=oleg-klimov
https://openai.com/research?authors=john-schulman-2
https://openai.com/research?topics=policy-optimization
https://openai.com/research?authors=filip-wolski
https://openai.com/research?authors=alec-radford
```

Run the Application: Embed Data

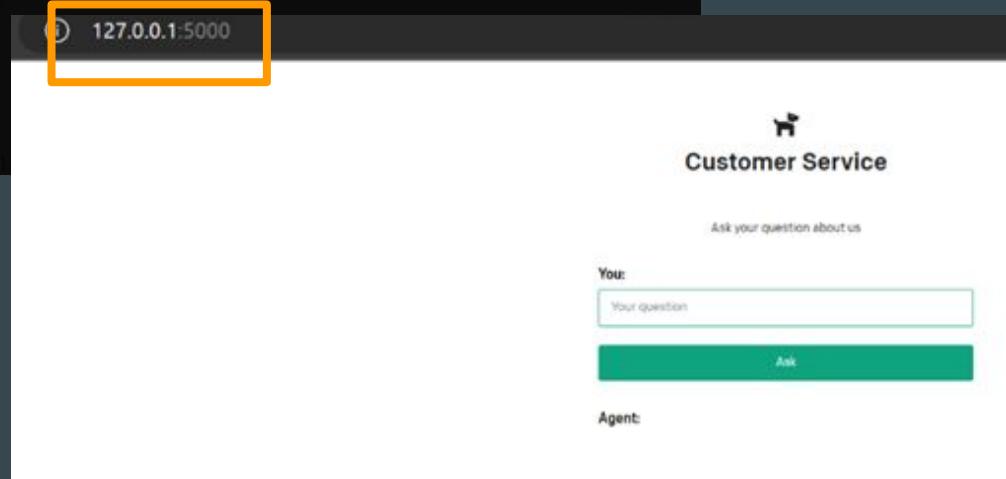
python3 embeddata.py

```
(venv) fatemanagori@DESKTOP-GLUEUFI:~/CustomerService_ChatGPT_ML$ python3 embedText.py  
(venv) fatemanagori@DESKTOP-GLUEUFI:~/CustomerService ChatGPT ML$ code
```

Run the Application: UI

Run the flask

```
(venv) fatemanager@DESKTOP-GLUEUF1:~/CustomerService_ChatGPT_ML$ flask run
 * Serving Flask app 'app' (lazy loading)
 * Environment: development
 * Debug mode: on
 * Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
 * Restarting with stat
 * Debugger is active!
 * Debugger PIN: 176-564-876
```



Run the Application

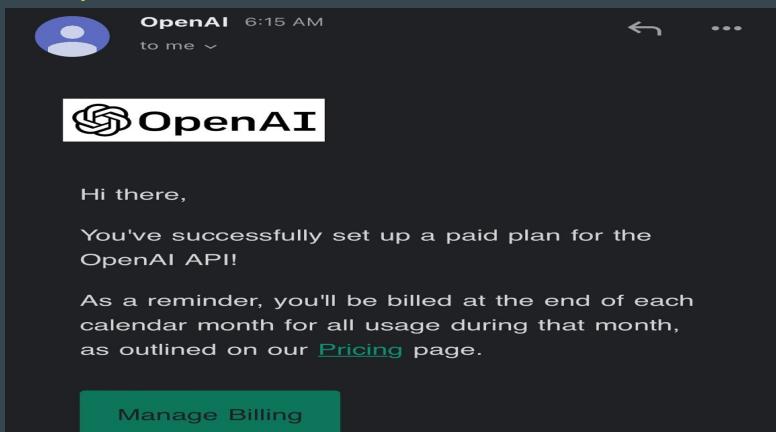
While running the flask we may get RATE TIME ERROR:

```
File "/home/fatemanagori/CustomerService_ChatGPT_ML/venv/lib/python3.10/site-packages/openai/api_requestor.py", line 680, in _interpret_response_line
    raise self.handle_error_response()
openai.error.RateLimitError: Rate limit reached for default-global-with-image-limits in organization org-1pVgyhmcTwUEnHhcZP6ltM3N on requests per min. Limit: 60 / min. Please try again in 1s. Contact support@openai.com if you continue to have issues. Please add a payment method to your account to increase your rate limit. Visit https://platform.openai.com/account/billing to add a payment method.
```

Solution: Add payment method, you can ask almost 5 Questions within a dollar.

Once you add payment you'll receive email →

then you can run flask successfully.



Best,
The OpenAI team

Test the Application: ubuntu Terminal

Open <http://127.0.0.1:5000/> in your browser and ask questions

```
tatemanagori@DESKTOP-GLUEUH: ~
* Debug mode: on
* Running on http://127.0.0.1:5000/ (Press CTRL+C to quit)
* Restarting with stat
* Debugger is active!
* Debugger PIN: 176-564-876
127.0.0.1 - - [14/Apr/2023 06:22:45] "GET / HTTP/1.1" 200 -
127.0.0.1 - - [14/Apr/2023 06:22:45] "GET /static/dog.png HTTP/1.1" 200 -
127.0.0.1 - - [14/Apr/2023 06:22:45] "GET /static/main.css HTTP/1.1" 200 -
127.0.0.1 - - [14/Apr/2023 06:22:45] "GET /static/dog.png HTTP/1.1" 304 -
Question from user: Is ChatGpt better then Bard?
127.0.0.1 - - [14/Apr/2023 06:25:21] "POST / HTTP/1.1" 302 -
127.0.0.1 - - [14/Apr/2023 06:25:21] "GET /?result=I+don%27t+know. HTTP/1.1" 200 -
127.0.0.1 - - [14/Apr/2023 06:25:21] "GET /static/main.css HTTP/1.1" 304 -
127.0.0.1 - - [14/Apr/2023 06:25:21] "GET /static/dog.png HTTP/1.1" 304 -
Question from user: When is chatGPT available to use?
127.0.0.1 - - [14/Apr/2023 06:26:11] "POST / HTTP/1.1" 302 -
127.0.0.1 - - [14/Apr/2023 06:26:11] "GET /?result=ChatGPT+is+available+to+use+during+the+research+preview+and+is+free+to+use. HTTP/1.1" 200 -
127.0.0.1 - - [14/Apr/2023 06:26:11] "GET /static/main.css HTTP/1.1" 304 -
127.0.0.1 - - [14/Apr/2023 06:26:11] "GET /static/dog.png HTTP/1.1" 304 -
Question from user: What is the free version of chatgpt available to use for all?
127.0.0.1 - - [14/Apr/2023 06:28:00] "POST / HTTP/1.1" 302 -
127.0.0.1 - - [14/Apr/2023 06:28:00] "GET /?result=ChatGPT+is+available+to+use+for+free+during+the+research+preview. HTTP/1.1" 200 -
127.0.0.1 - - [14/Apr/2023 06:28:00] "GET /static/main.css HTTP/1.1" 304 -
127.0.0.1 - - [14/Apr/2023 06:28:00] "GET /static/dog.png HTTP/1.1" 304 -
Question from user: Who invented chatGPT?
127.0.0.1 - - [14/Apr/2023 06:29:00] "POST / HTTP/1.1" 302 -
127.0.0.1 - - [14/Apr/2023 06:29:00] "GET /?result=ChatGPT+was+invented+by+OpenAI. HTTP/1.1" 200 -
127.0.0.1 - - [14/Apr/2023 06:29:00] "GET /static/main.css HTTP/1.1" 304 -
127.0.0.1 - - [14/Apr/2023 06:29:00] "GET /static/dog.png HTTP/1.1" 304 -
Question from user: how is GPT 3.5 different then GPT 4.0?
127.0.0.1 - - [14/Apr/2023 06:30:24] "POST / HTTP/1.1" 302 -
127.0.0.1 - - [14/Apr/2023 06:30:24] "GET /?result=GPT-4+is+more+reliable%2C+creative%2C+and+able+to+handle+much+more+nuanced+instructions+than+GPT-3.5. HTT
127.0.0.1 - - [14/Apr/2023 06:30:24] "GET /static/dog.png HTTP/1.1" 304 -
127.0.0.1 - - [14/Apr/2023 06:30:24] "GET /static/main.css HTTP/1.1" 304 -
```

Test Application: ask questions at Web Browser

Open <http://127.0.0.1:5000/> in your browser and ask questions

The screenshot shows a web browser window with a red box highlighting the address bar. The address bar contains the URL <http://127.0.0.1:5000/?result=ChatGPT+is+available+to+use+during+the+research+preview+and+is+free+to+...>. The browser interface includes standard icons for back, forward, search, and user profile.

The main content area displays a "Customer Service" page. At the top is a logo of a small dog and the text "Customer Service". Below this is a placeholder text "Ask your question about us". Under the heading "You:", there is a text input field containing the question "When is chatGPT available to use?". A large green "Ask" button is positioned below the input field. Under the heading "Agent:", the response "ChatGPT is available to use during the research preview and is free to use." is displayed.

Test the Application: ask questions at Web Browser

A screenshot of a web browser window displaying a customer service application. The URL in the address bar is 127.0.0.1:5000/?result=ChatGPT+is+available+to+use+for+free+during+the+research+preview. The page features a logo of a dog head and the text "Customer Service". Below this, there is a text input field with placeholder text "Ask your question about us" and a message box containing "What is the free version of chatgpt available to use for all?". A green "Ask" button is positioned below the message box. The response section, labeled "Agent:", shows the text "ChatGPT is available to use for free during the research preview."

Customer Service

Ask your question about us

You:

What is the free version of chatgpt available to use for all?

Ask

Agent:

ChatGPT is available to use for free during the research preview.

Test the Application: ask questions at Web Browser

Customer Service

Ask your question about us

You:

Who invented ChatGPT?

Ask

Agent:

ChatGPT was invented by OpenAI.

Customer Service

Ask your question about us

You:

how is GPT 3.5 different than GPT 4.0?

Ask

Agent:

GPT-4 is more reliable, creative, and able to handle much more nuanced instructions than GPT-3.5.

Conclusion

These concepts and techniques will go a long way in helping you build your own application. That said, this simple example demonstrates just a sliver of what's possible! The completions endpoint is flexible enough to solve virtually any language processing task, including content generation, summarization, semantic search, topic tagging, sentiment analysis, and so much more.

One limitation to keep in mind is that, for most **models**, a single API request can only process up to 2,048 tokens (roughly 1,500 words) between your prompt and completion.

For this application the cost involved in running the application was very very reasonable.

Enhancement Ideas

- Improve performance by adding more data to the corpus.
- Utilize pre-trained models to generate high-quality embeddings.
- Fine-tune hyperparameters to optimize the quality of the embeddings.
- Apply data cleaning techniques to enhance the quality of the embeddings.
- Implement efficient indexing algorithms to speed up the search process.
- Incorporate domain-specific embeddings to improve accuracy for specific use cases.

References:

Prof Henry's Class Material

Openai Document

THANK YOU

