

## Overview

### About OpenAI API

The OpenAI API can be applied to virtually any task that involves understanding or generating natural language, code, or images. This API offer 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.

About the Version we used: GPT-3.5-Turbo

This Version will understand and process text by breaking it down into tokens. Tokens can be words or just chunks of characters. For example, the word “hamburger” gets broken up into the tokens “ham”, “bur” and “ger”, while a short and common word like “pear” is a single token. Many tokens start with a whitespace, for example “hello” and “ bye”.

The number of tokens processed in each API request depends on the length of both your inputs and outputs. As a rough rule of thumb, 1 token is approximately 4 characters or 0.75 words for English text. One limitation to keep in mind is that your text prompt and generated completion combined must be no more than the model's maximum context length (for this models, 2048 tokens, or about 1500 words).

OpenAI API can be used through Python library by installing their libraries by typing command “pip install openai”

```
Microsoft Windows [Version 10.0.22621.1413]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\System32>pip install openai
Requirement already satisfied: openai in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (0.27.2)
Requirement already satisfied: requests>=2.20 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from openai) (2.28.2)
Requirement already satisfied: tqdm in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from openai) (4.65.0)
Requirement already satisfied: aiohttp in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from openai) (3.8.4)
Requirement already satisfied: charset-normalizer<4,>=2 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from requests>=2.20->openai) (3.1.0)
Requirement already satisfied: idna<4,>=2.5 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from requests>=2.20->openai) (3.4)
Requirement already satisfied: urllib3<4.27,>=1.21.1 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from requests>=2.20->openai) (1.26.15)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from requests>=2.20->openai) (2022.12.7)
Requirement already satisfied: attrs>=17.3.0 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from aiohttp->openai) (22.2.0)
Requirement already satisfied: multidict<7.0,>=4.5 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from aiohttp->openai) (6.0.4)
Requirement already satisfied: async-timeout<5.0,>=4.0.0a3 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from aiohttp->openai) (4.0.2)
Requirement already satisfied: yarl<2.0,>=1.0 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from aiohttp->openai) (1.8.2)
Requirement already satisfied: frozenlist>=1.1.1 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from aiohttp->openai) (1.3.3)
Requirement already satisfied: aiosignal>=1.1.2 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from aiohttp->openai) (1.3.1)
Requirement already satisfied: colorama in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11.qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from tqdm->openai) (0.4.6)

[notice] A new release of pip available: 23.3.1 -> 23.8.1
[notice] To update, run: c:\users\tulas\appdata\local\MicrosoftWindowsApps\PythonSoftwareFoundation.Python.3.11.qbz5n2kfra8p0\python.exe -m pip install --upgrade pip

C:\Windows\System32>
```

Once installed, you can use the bindings and your secret key to run the following:

```
import os

import openai

# Load your API key from an environment variable or secret management service

openai.api_key = os.getenv("OPENAI_API_KEY")

response = openai.Completion.create(model="text-davinci-003", prompt="Say this is a test",
temperature=0, max_tokens=7)
```

### About LLaMA AI model: (Source Code)

Large Language Models (LLMs) are artificial intelligence tools that can read, summarize and translate texts and predict future words in a sentence letting them generate sentences similar to how humans talk and write.

Version: DeFiLlama 1.1.0 can be install by using pip install DeFiLlama

```
Administrator: Command Prompt
Microsoft Windows [Version 10.0.22621.1413]
(c) Microsoft Corporation. All rights reserved.

C:\Windows\System32>pip install DeFillama
Collecting DeFillama
  Downloading DeFillama-1.1.0-py3-none-any.whl (7.7 kB)
Requirement already satisfied: requests>=2.18.4 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11_qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from DeFillama) (2.28.2)
Requirement already satisfied: charset-normalizer<4,>=2 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11_qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from requests>=2.18.4->DeFillama) (3.1.0)
Requirement already satisfied: idna<4,>=2.5 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11_qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from requests>=2.18.4->DeFillama) (3.4)
Requirement already satisfied: urllib3<1.27,>=1.21.1 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11_qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from requests>=2.18.4->DeFillama) (1.26.15)
Requirement already satisfied: certifi>=2017.4.17 in c:\users\tulas\appdata\local\packages\pythonsoftwarefoundation.python.3.11_qbz5n2kfra8p0\localcache\local-packages\python311\site-packages (from requests>=2.18.4->DeFillama) (2022.12.7)
Installing collected packages: DeFillama
Successfully installed DeFillama-1.1.0

[notice] A new release of pip available: 22.3.1 -> 23.0.1
[notice] To update, run: c:\users\tulas\appdata\local\Microsoft\WindowsApps\PythonSoftwareFoundation.Python.3.11_qbz5n2kfra8p0\python.exe -m pip install --upgrade pip

C:\Windows\System32>
```

## Bubble.io

Traditional web applications require you to manage your code and set up a deployment process to a web server. Bubble handles deployment and hosting for you. There are no hard limits on the number of users, volume of traffic, or data storage. Bubble offers total design freedom without any knowledge of HTML or CSS. Create mobile-friendly layouts and dynamic content for a polished product that you'll be proud to show off to your prospects, customers, or investors.

## INTRODUCTION TO CONCEPT OF AI DEVICES

When tractors and combines were invented they definitely put a lot of low skilled labours out of business if all you knew back then was how to push a plow you were in trouble but is farming totally obsolete today no way the farmers who were stuck in the same old way of doing things were put out of business but the farmers who chose to leverage and take advantage of the new technology thrived and were more productive than ever before same principle applies to tech .

I mean if you're a junior developer who just Googles copies and pastes code all day I'd be a little bit nervous if you're a copywriter who just writes words without deep human touch I'd be worried if you're a business owner who isn't actively thinking about how artificial intelligence might enhance your solution you're probably going to get outmatched here pretty soon by the competition.

I mean the proof is in the pudding look at all the companies rapidly adding AI to their product right now Snapshot is using it as an experimental product for causal chats or even for help with custom pretty about friends instacart is using it to enhance their search feature so users can get inspirational shoppable answers to their food questions assistant feature which makes personalized shopping recommendations based on user requests and these are just a few of the thousands of services out there turning to AI to enhance their offering here's the cold hard truth if you ignore AI .

Think you're good without it you're probably going to be in trouble but if you embrace and leverage AI to your advantage you'll be more potent than ever it is your destiny so i'm assuming you're not a gajillionaire with access to funding and devs and resources to build your own proprietary AI model if that's the case this video is for u because i'm about to show you exactly how to create your own white labelled custom artificial intelligence app powered by open ai's chat GPT API which just launched

Go to Bubble.io and Create an account, when you are in your bubble account you'll see something like this you'll hit create an app and i'm just going to go ahead and say chat GPT 44 and i'm going to create the app now when you first create an app Bubble has a little application assistant you can just skip that for now the first thing you're going to want to do is head to the plug in section, add a plug-in and this top one right here this is the number one used plug-in by bubble users so go ahead .

click install and done now you're going to want to add an API, what API well remember we're connecting with chat GPT so let's go to [platform.openai.com](https://platform.openai.com) go ahead and click get started verified and create an account you may need to verify your email i'll do that real quick all right so once have your account set up you want to the API documentation and for this we're using chat GPT they're brand new API powered by GPT 3.5 turbo whatever that means but that's what we're using now

I'm going to go straight to the API reference for this chat GPT product and again i don't know how to code so what i'm looking for is this *curl* code right here i'm literally going to just copy this *curl* code and i'm going to go back to my bubble editor and i'm going to go to this button right here that says import another call from *curl* and i'm going to paste what i just copied and import now this old one i could just trash because i don't need it anymore and now this API I can call chat GPT and as you can see bubble Auto magically imported the entire call and structured it exactly how we need it to be structured well almost exactly the only thing we need to replace is we need to put our API key right

here instead of these words so let's go back to open AI and click personal and go to view API keys now you're going to want to create your very first key and copy it and you'll never be able to see it again so make sure you got it copied and then go straight back to bubble and in place of the your API key words just paste that key now we should be good to go the prompt we're giving to chat gpt is hello let's see what chat gpt say back if i initialize this call hooray it worked now how do i know it worked because this po-up here is showing all of the returned values that open AI is sending back to us after having received our prompt .

I always kind of like to look here at the raw data here now open AI is sending us an ID which i don't really care about it's sending us a bunch of mumbo jumbo here it's sending us kind of how many tokens we need you can look at their pricing and see how much a token is worth and then it's sending us the response that's what i really care about it's saying hello there how can i assist you today so that's what i care about so if i go back up here i don't care about this so i'm just going to ignore it i don't care about this i'm going to ignore it i don't care care about this this this ...

The only thing i really care about is the choices section that contains the message that contains the content so i could even get rid of the role i don't care i know that it's my robot assistant i do care about the message content i don't care about the finishes reason for now and i don't care about the index for now now i can hit save the last thing we're going to want to do real quick before we move on is we don't want to always say the word hello to the chat gpt right we want to be able to type whatever we want to type so let me go ahead and highlight this and bubbles says use open carrot closed carrot symbols for dynamic values so let's do this because this is we don't want to always say the static hello we want this to be dynamic so let's go ahead and say open carrot close carrot and then just say user prompt or something like that in the middle now that gives the the ability to add our own custom user prompt i'am going to uncheck private here.

I'am going to check private here and here because these will always stay the same as now for my user prompt i could say something like how old are you and re-initialize the call and now as you can see it's coming back with i am an AI language model and do not have an age as humans do all right fine hit save and our API connection is ready to roll now let's build the UX let's go back to the design tab let's grab a group element throw it on the page something like that should do and i personally like to change the layout so i'am going to change the layout so i'am going to double click anywhere on the page and go to layout and then choose not a fixed container i like to do like maybe for this we could do an aligned a parent container so now i have my group and i'll make it a column container and i'll Center it vertically in the middle of the page.

Now i'm just going to make this page background like a nice little gray here just a suitable gray and then i'll make this group itself may be just like a flat white and i'll give it a little bit of a shadow and give it a roundness of 20.this will be our chat prompt box let's give this a title so i'm going to throw in a piece of text here maybe something like that and i'm going to say no code GPT i'm so creative with my naming i know and i am going to hit Center here and i'm going to go to layout and center the whole element i'm going to go to this group as you can see this text element is snug right up to the top of this group i am going to go ahead and go to the padding and just give it a little bit of padding like 30 all round 30 pixels all around now i'm going to bring this size up .

Alright next i need a way for the user to type their prompt right so let's go and grab something called a multi-line input and i'm just going to throw that in here somewhere maybe this size and i am going to remove the style and maybe make this i like the font enter and i am going to center this thing now i'm going to grab a text element that will kind of serve as my button to submit and i'm going to remove the style and i'm going to center this text and i'm going to center the element itself and now

i'm going to go back to the appearance make the line spacing one and center the text vertically now i don't want the button to be right up next to the input so let's give it a little bit of margin here in the layout all right now let's go to back to the appearance and make the background maybe like a blue .bring the roundness to like 20 or something we can bring the font color to white now i don't want it to say edit me we can say something like submit and we might even make it bold as you can see there's some Dead Space here at the bottom so let's go to layout and let's bring this down to zero at minimum and that way it'll just fit the height to the content that's within it alright so what's next what we want to have happen when they type in this input and hit submit.

Well we want it to give us an answer right so to give us an answer what do we need to have happen well we we need to ping the open AI API have chat gpt process and answer for us and then ping our app back with that answer so let's right click on this button and start edit workflow that means when they click on this button what workflow will occur let's see as you can see that automatically took us to the the workflow tab which uses kind of like an if then logic so if this text is clicked then what do we want to have happen.

Well the first thing we want is we want to call that chat gpt API and it's not here because i need to go to the plugins and right now i'm using it as data i want to use it as an action now if i go back to the workflow and i say that chatGPT there we go we have our call by default we have how old are you but we don't want it to always ask how old are you we want it to be dynamic depending on what the user just typed in the input so we'll insert Dynamic data and what data where do we get the text that we want well from let's go back to the design tab this from this multi-line input called multi-line input or you can name it whatever you want maybe i could name it prompt something like that so i'm just going to copy all this command C.

Go back to my workflow and go back to the dynamic expression and say i want whatever's inside of multi-line input prompt i want its value to be the prompt all right that's awesome we're going to call chatGPT with our prompt and it should work but how do we actually display the answer we receive well let's go back to the design Tab and what i'm going to do is i'm literally just going to copy and paste so now if you go to the elements tree you might notice that i have a group a and i have a Group B so group a we're just going to go ahead and say that's going prompt and now i'm going to hide that temporarily and i'm going to go to group b and i'm going to call this grouped answer now the answer i receive will be displayed here so i don't need an input so i'm just going to trash that and now i'm going to go get another piece of text throw that in here somewhere remove its style let's make it black let's go to the layout let's center it let's get rid of its minimum height for now .

Let's go back to the appearance and let's say we don't want it to always say edit me we want it to say whatever the response from chat gpt was right well how do we know what response it was well that goes back to the workflow and i'll show you that here in just a second what we're going to do is we're going to send it or display it in this group answer right so we need group answer to know what to expect right so let's go to the type of content and say we're expecting what is it an image is it a file what is it no it's text so we're going to say the type of content of this group is going to be text now the data source is going to be empty initially because we don't quite yet have an answer from chatGPT but once we do we will provide that data at that point all right so now back to the text element where is it let me open up my group answer and we got the title here and we got the text element that's flat because it has nothing inside of it .

i'm going to click on this Dynamic expression and say i want to grab from the parent group's text right so this text it's parent is group answer and group answer is what we're going to display chatgpt answer in maybe we'll make this italicized or something so it looks more like a quote from a robot i

guess and then let's go to the submit button and obviously they're not submitting anything here so we'll just say ask something else all right so let's go back and start from the beginning really fast just so that we're on the same page we're going now to group prompt so when they something in and they click submit i'm going to right click start the workflow for that i'm calling chat GPT what am i calling it with well the prompt that they typed and once i get my answer i'm going to go ahead and hide group prompt because i have my answer i don't need it anymore i'm going to display the answer in group answer what data do i display well whatever chat gpt answered so let's click on this and say we want the result of step one whatever we go from step one from that API call we want to pull remember it was in the choices category .

We'll say the first items message content okay so we've hidden group prompt we've shown the answer but now we've got to actually show the element group answer now we're doing this hiding and showing of these groups and i just realized we probably should real quick go to group prompt and say you are visible on page load and group answer you are not visible on page load because we'll just be showing this group in that workflow after we receive the answer we're not quite there yet but let's just give this a preview and see where we're at now i'm going to go ahead and get rid of this question mark debug mode equals true just because that this is Bubbles debug mode and it is useful but right now i just want to see the app as a user would see it so i'm going to delete that and refresh so i've got my no code GPT .

I'm going to go ahead and type where are you from i'm so creative i'm going to hit submit it's doing some thinking and boom we have an answer awesome well let's ask something else well nothing's happening i'm clicking and nothing's happening why well because we didn't build the workflow for that so let's go back and let's click ask something else right click and start the workflow for that and what do we want to have happen well we want to go back to the prompt group and hide the answer group right so let's just say hide group answer show group prompt and let's see what that gives us let's refresh the page let's say give me one sentence about New York city submit and there it is now let's try out something else workflow if i click ask something else it goes back but i see a problem here i don't want my last prompt to be in that input i want it to be erased and cleared out.

So i can ask brand new prompt let's do that real quick if i go back here after i've hidden the group prompt i've displayed the data i've shown group answer i want to do one last thing called reset relevant inputs that should get rid of what's stuck in here let's refresh the page and give it one more try write me a poem about how cool no code is submit boom there we go we've got an answer now how could we enhance this well i noticed when i enter a prompt and i hit submit it's thinking it takes a few seconds to think through that so why don't we display its thinking visually well let me show you how to do that so let me go back to the bubble editor and if i go to the submit button and i click this icon here i'm going to add a custom state and i'm going to call it thinking question mark and i'm going to say this will be either yes or no .and i 'm going to say normally it's not thinking but when i click it so let's right click start the workflow when i click it well i am going to right click on step one and insert an action to be even before step one and i'm going to say i'm going to set the state of this text element this text submit and what state an i setting the thinking one i just barely created .

I'm going to say yes it is thinking and now at the very end we can go ahead and copy that and paste that and after it's done thinking well it's done thinking right so we're going to set that back to no but initially it's going to be yes now let me go back to the design tab and say if i go to the conditional tab of this button and Define another condition if i say this text thinking is yes i want it to show something different so i want the text to be something like processing dot dot dot and even better i want it to maybe have a little spinner icon so just FYI this i am going to paste this code here this gives you a little spinner animation just FYI all right let's just see how this looks now i'm going to

refresh the page and say how tall is the Stratosphere in Las Vegas question mark if i hit the submit as you can see it's processing so that adds a nice little touch now let's ask something else let's just do something fun here to enhance it just a little bit more let's go to a place called [lottiefiles.com](http://lottiefiles.com) and let's search for a robot animation i like this one ..i am going to download and i am going to download the Lottie Jsonfile now let's go back to our Bublrr app after i input the prompt may be i want the answer group to look a little bit more friendly so i'm going to hide the prompt group show the answer group and let's just get rid of this title let's just put the bot right there so the way to put a Lottie Json file in is you're going to need to go to the plug in section and hit add plug in and say Lottie and the one i like is called *Lottie animations* maintained so install that totally free and go back to the design tab .

Now we've installed that plug-in if you search here you'll see the Lottie element grab that drop it onto the group and let's go let's try something like 200 by 500 something like that let's center it and let's go to the appearance tab and let's upload that json file that we just downloaded all right let's give that a show and see what it looks like refresh the page here in our bubble run mode and now let's say how are you today question mark submit we got our nice processing animation and there it is foreign so there you .