

# Review of Integrating Chatgpt in Asp.Netframework

Shraddha A. Kale, Prof.S.A.Vyawhare, Prof.P.P.Rane

*Department of Computer Science and Engineering, Rajshri Shahu College of Engineering Buldhana 443001, Maharashtra India*

*Department of Computer Science and Engineering, Rajshri Shahu College of Engineering Buldhana 443001, Maharashtra India*

*Department of Computer Science and Engineering, Rajshri Shahu College of Engineering Buldhana 443001, Maharashtra India*

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**ABSTRACT:** ChatGPT is a comprehensive language model trained by brilliant minds at OpenAI. It uses deep learning to generate human-like responses to natural language inputs. One area where ChatGPT has the potential to provide significant benefits is its integration with .NET, a popular software framework used for building applications for Windows, mobile, web, and gaming platforms. This powerful combination can enable software companies to tap into the remarkable capabilities of AI and provide customers with an unparalleled user experience. The possibilities are endless, from enhancing customer support to automating tasks, and even enabling more intuitive interactions with software application.

**KEYWORDS:** ChatGPT API, Artificial intelligence, integration, .NET Framework.

## I. INTRODUCTION

Artificial intelligence has emerged as a new means for fostering customer experience and corporate efficiency. Businesses have begun using Chatbots to improve customer service and give clients an easy way to interact with a firm without any human support. The ChatGPT language model was built with the same logic to respond the user queries in conversational English. number of platforms, such as DOTNET, React.js, and Angular, acquiring popularity in the market, now it's time to evaluate ChatGPT's compatibility with them.

integrating ChatGPT into the .NET project is the best option for **custom software development companies** to boost their development process. In addition, it can help improve customer experience, increase efficiency, and provide valuable insights into customer behavior, while reducing costs associated with manual labor. A .NET library specifically designed to work with OpenAI APIs.

By using these, you may simplify the integration process and allow apps to fully utilize Chat-GPT's capabilities.

## II. LITERATUREREVIEW

ChatGPT is an artificially intelligent chatbot which is developed by OpenAI. ChatGPT has the capability to do any operation on demand and with time it will have more features, there is no doubt in the future it may replace google as well. ChatGPT has the capability to write articles, code, or any essay as demanded, even if it can review the code. The response time of ChatGPT is the friction of seconds, even if it can help in solving math problems.

ChatGPT is still in its early stages and it has limitations as of now but with time it will improve more. The 1st release of ChatGPT was available for public use on Nov. 30, 2022, and from day one it is trending in the market it is already showing potential as a multi-purpose AI tool, As well as idea, scriptwriting, gameplay, development, and many more, we can also use ChatGPT AI to chat about any topic of our interest. its **technical response** is the: "OpenAI's ChatGPT is the natural language processing (NLP) model. It is the transformer-based model that's been trained on a massive corpus of conversational data. It is intended to respond to user input in a human-like manner, allowing it for natural conversations with the virtual assistant." On the other side, the **simple answer** reads, "ChatGPT works by using the large corpus of conversational data to train the transformer-based model. This model is then used to generate the human-like responses for user input, which allow natural conversations with the virtual assistant." The company gave a statement that the chatbot uses Reinforcement Learning from Human

Feedback (RLHF) technology but it is tweaked to appear friendly to humans. It is based on the GPT-3.5, a language model used for deep learning to produce human-like text. However, there is the possibility that users may get different types of replies if they ask the same question in the future and the reason is chatbots will improve over time and understand queries better using machine learning or AI.

### III. TEXT COMPLETION

Text completion is a language processing task that involves generating the missing portion of a partially given text sequence. It is a type of text generation task where the model is given an incomplete text promptly and is asked to generate the missing text based on the context. **For example**, given the prompt "The weather is really nice today," a text completion model could generate the next few sentences, such as "I think I'll go for a walk in the park. The sun is shining and there's a light breeze." The goal of text completion is to generate text that is coherent and grammatically correct, and that continues the meaning and context of the original prompt. Text completion models use machine learning algorithms to learn patterns and relationships in text data, allowing them to generate new text that is consistent with the given prompt. The models can be trained on large text corpora and fine-tuned for specific tasks, such as generating conversation responses and completing sentences, paragraphs, or articles. Text completion is a valuable tool for various applications, including chatbots, content generation, and text editors with auto-complete functionality.

### IV. GENERATING API KEY PROCESS

To generate an OpenAI API key, follow these steps:

1. Signup for an OpenAI account. Go to the OpenAI website and create a new account.
2. Confirm your email address.
3. Now, Log in to your account and navigate to the 'View API keys' section as given below
4. Now, click on 'Create new secret key' as given below

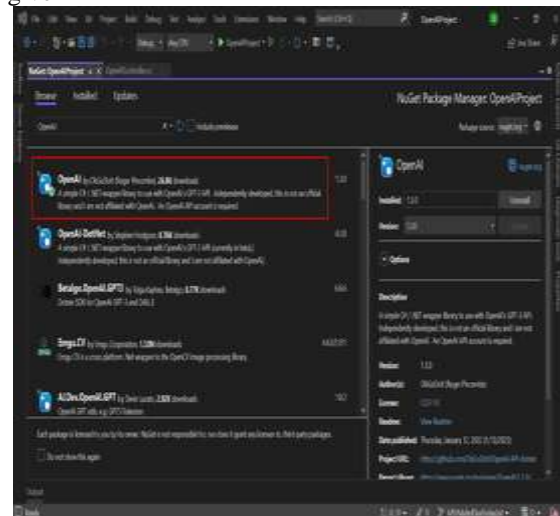


5. Store your API key in a secure location, as it will be required to access the OpenAPI completions. You can copy the key and save it for future use. OpenAI has usage and resource limitations for its API, so be sure to check its documentation here for details on usage and pricing.

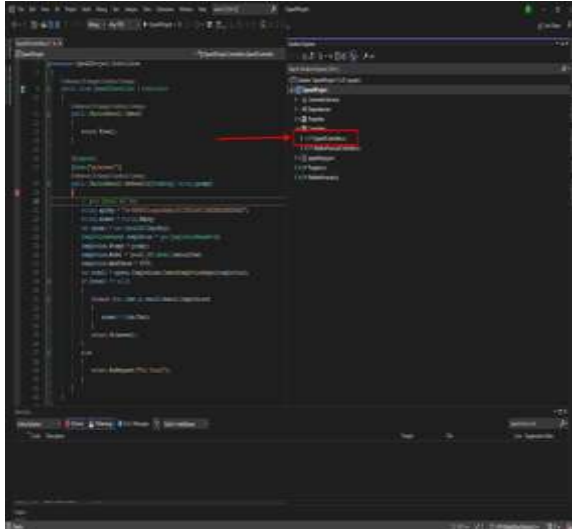
### V. CHATGPT IN ASP.NET CORE WEB API

To implement ChatGPT follow the steps given below

- First, create an ASP.NET Core Web API project.
- Install the **OpenAI** NuGet package as given



- Now create a new controller file **OpenAIController** as given below



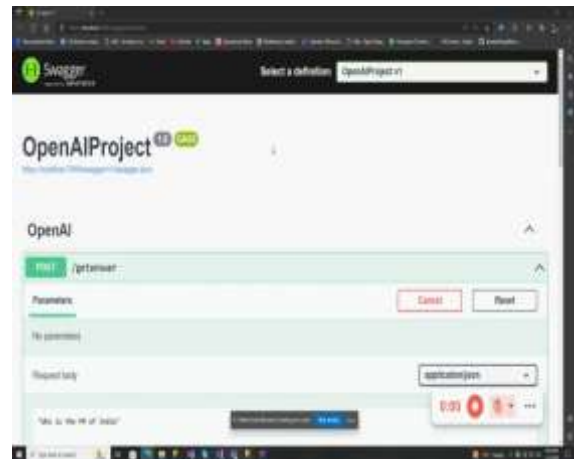
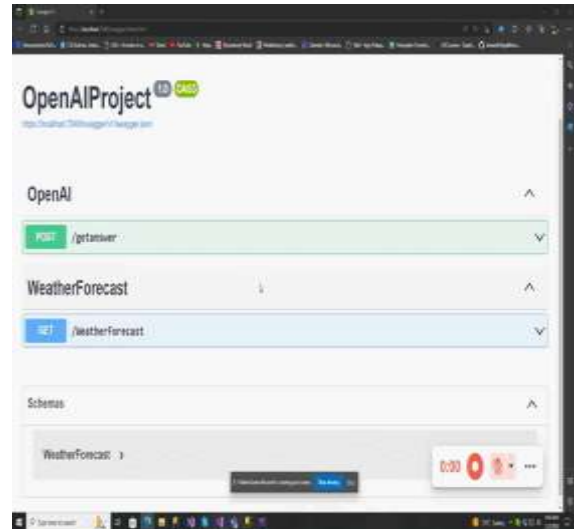
- Now add the following code in **OpenAIController.cs** file as given below

```

1. [HttpPost]
2. [Route("getanswer")]
3. public IActionResult GetResult([FromBody] string prompt)
4. {
5.     //your OpenAI API key
6.     string apiKey = "sk-
7.     string answer = string.Empty;
8.     var openai = new OpenAIAPI(apiKey);
9.     CompletionRequest completion = new CompletionRequest();
10.    completion.Prompt = prompt;
11.    completion.Model = OpenAIAPI.Model.DavinciText;
12.    completion.MaxTokens = 4000;
13.    var result =
14.    openai.Completions.CreateCompletionAsync(completion);
15.    if (result != null)
16.    {
17.        foreach (var item in result.Result.Completions)
18.        {
19.            answer = item.Text;
20.        }
21.        return Ok(answer);
22.    }
23.    else
24.    {
25.        return BadRequest("Not found");
26.    }
27. }
    
```

- CopyIn the above code, we have created an endpoint with **getanswer**. Variable **apikey** is holding the API key you have generated. Create an object of **CompletionRequest**. Here we need to define the **Model** type and **MaxTokens**. MaxToken will decide the length of the text so if you want a long answer then keep the MaxToken value large.

Now we will run the endpoint in the postman and see the output



## VI. BENEFITS OF INTEGRATING CHATGPT INTO YOUR .NET PROJECT

- 1. Increased Efficiency:** With its Artificial intelligence, you can automate repetitive tasks, such as answering FAQs, handling users with L2 support, and so on. Thus, it helps your team to focus on more complex tasks.
- 2. Improved Customer Support:** ChatGPT enables the product support team to provide instant and accurate responses to customer queries and improve customer satisfaction.
- 3. Enhanced Personalization:** By integrating ChatGPT into your .NET project, you can provide personalized experiences to your customers, based on their preferences and behaviors.
- 4. Cost Savings:** Automating customer support tasks with ChatGPT can help reduce costs associated with manual labor and errors.
- 5. Improved Data Analytics:** This AI platform can collect and analyze customer data, providing

valuable insights into customer behavior and preferences, which can inform business decisions.

**6. Multilingual Support:** It can provide support in multiple languages, allowing you to serve customers from different regions and cultures.

**7. 24/7 Availability:** ChatGPT can provide 24/7 support to your customers, improving their experience and increasing customer loyalty.

## VII. CONCLUSION

ChatGPT is a revolutionary conversational AI model that is transforming the way we interact with technology. Its ability to generate human-like text responses and its versatility make it a valuable tool for various applications, and its development is a testament to the progress made in the field of AI and natural language processing. To integrate ChatGPT in ASP.NET Core Web API first you need to generate the OpenAI API key and then use that API key in the code.

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