How To Implement ChatGPT In Django

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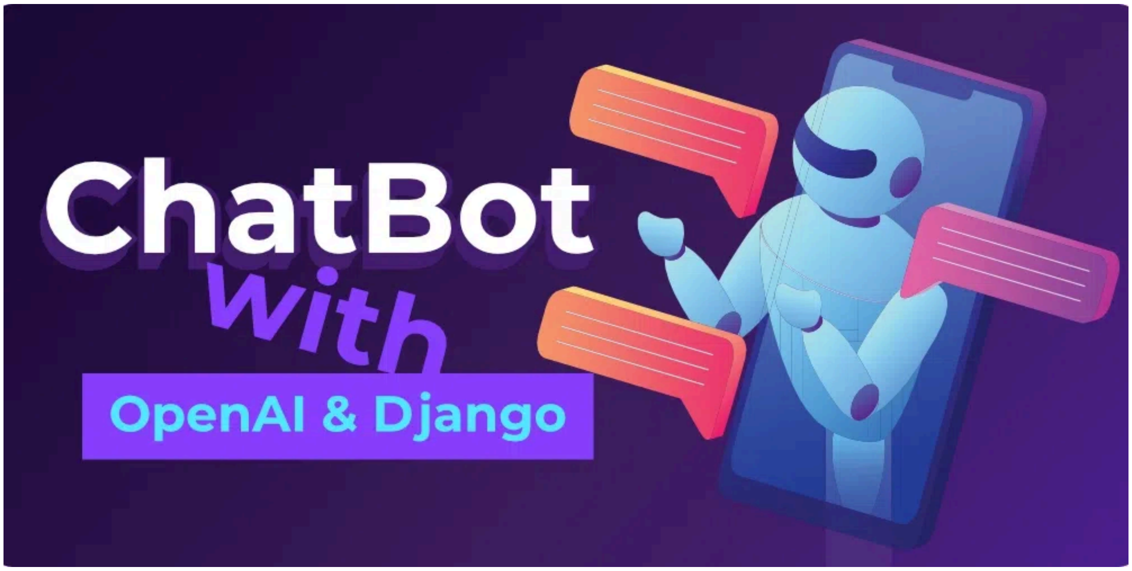
Integrating ChatGPT into a Django application allows you to create dynamic and interactive chat interfaces. By following the steps outlined in this article, you can implement ChatGPT in your Django project and provide users with engaging conversational experiences. Experiment with different prompts, improve the user interface and explore further possibilities to enhance the functionality of your chat application.



Steps to Implement ChatGPT in a Django Application using API

Integrating ChatGPT into a Django web application allows you to build interactive chat interfaces and provide dynamic conversational experiences to users. If you're looking to master such integrations and explore more advanced projects, the **Django Web Development Course** will guide you step-by-step. Let's see the overall steps in summary:

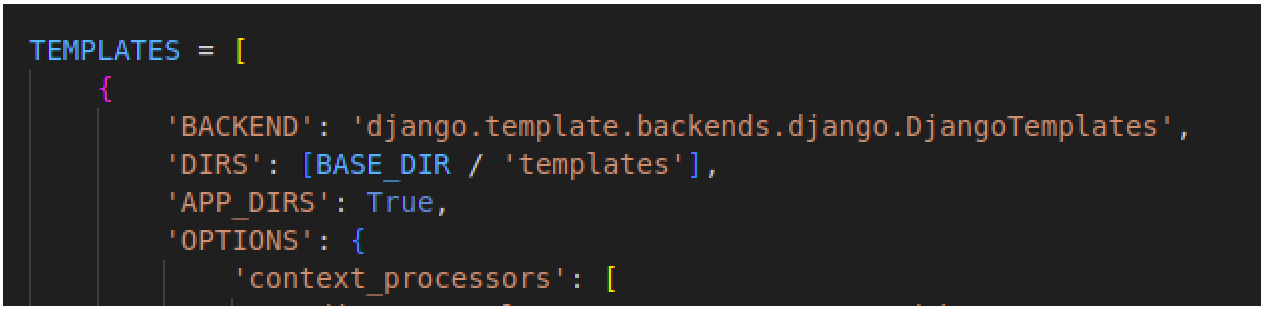
- Setting up the Django Project.
- Define a Django view that handles the chat functionality.
- Configure Django's URL routing to connect the chat view to a specific URL pattern.

- Designing the User Interface.
- Testing and Running the Application.

Implement ChatGPT in a Django Application

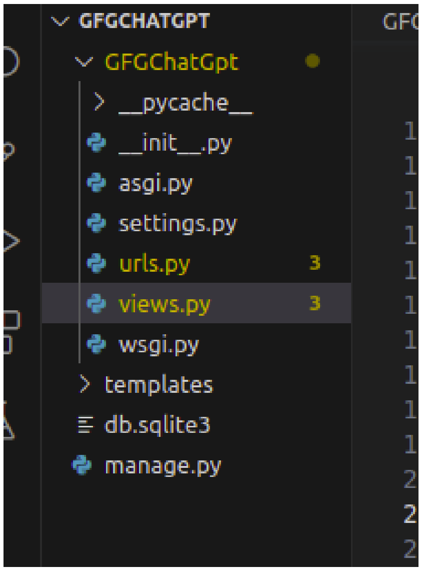
Basic Setup

Install Django using pip, and Create a new Django project. Made changes in setting.py, mention your templates folder in TEMPLATES.



```
TEMPLATES = [
    {
        'BACKEND': 'django.template.backends.django.DjangoTemplates',
        'DIRS': [BASE_DIR / 'templates'],
        'APP_DIRS': True,
        'OPTIONS': {
            'context_processors': [
```

Folder Structure



```
GFGCHATGPT
  GFGChatGpt
    __pycache__
    __init__.py
    asgi.py
    settings.py
    urls.py      3
    views.py     3
    wsgi.py
  templates
  db.sqlite3
  manage.py
```

views.py: Creating the Chat View

The code consists of two functions: query_view and get_completion.

- **query_view** is a view function that handles the HTTP requests made to the associated endpoint. When a POST request is received, it extracts the prompt from the request data, calls the get_completion function to generate a completion based on the prompt, and returns the completion as a JSON response. For GET requests, it renders the 'index.html' template.

- **get_completion** is a function responsible for generating a completion based on a given prompt using the OpenAI API. It makes a request to the OpenAI API's Completion endpoint, specifying the prompt, maximum tokens, engine, temperature, and other parameters. It retrieves the generated completion from the API response and returns it as the output of the function.

Python

```python
from django.shortcuts import render
from django.http import JsonResponse
import openai

openai.api_key = 'YOUR_API_KEY'

def get_completion(prompt):
    print(prompt)
    query = openai.Completion.create(
        engine="text-davinci-003",
        prompt=prompt,
        max_tokens=1024,
        n=1,
        stop=None,
        temperature=0.5,
    )

    response = query.choices[0].text
    print(response)
    return response


def query_view(request):
    if request.method == 'POST':
        prompt = request.POST.get('prompt')
        response = get_completion(prompt)
        return JsonResponse({'response': response})
    return render(request, 'index.html')
```

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urls.py: Setting up URLs

This code sets up two URL patterns: one for the admin site and another for the root URL, and another which is associated with the query_view function in the views module.

Python

```python
from django.contrib import admin
from django.urls import path
from . import views


urlpatterns = [
    path('admin/', admin.site.urls),
    path('', views.query_view, name='query'),

]
```

template/index.py: Creating User Interface

Create an HTML template for the chat interface using HTML, CSS, and Bootstrap, and Set up the necessary JavaScript and AJAX code to handle user interaction.

HTML

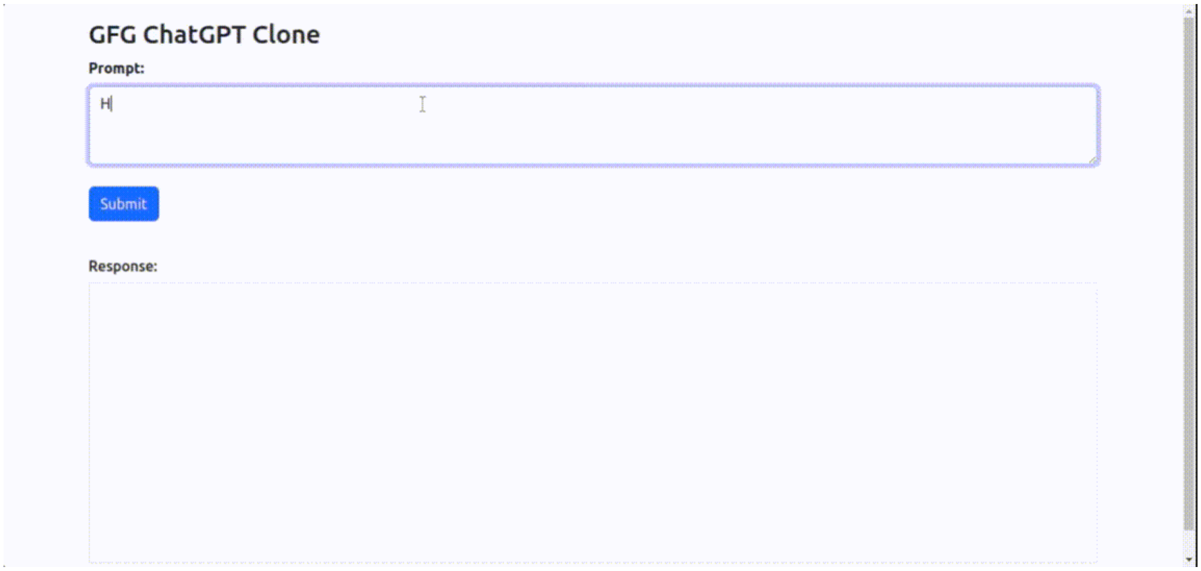
```html
<!-- query.html -->
<html>
<head>
    <title>Query</title>
    <script src="https://code.jquery.com/jquery-3.6.0.min.js"></script>
    <script src="https://cdn.jsdelivr.net/npm/js-cookie@3.0.0/dist/js.cookie.min.js"></script>
    <script src="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-alpha1/dist/js/bootstrap.bundle.min.js" integrity="sha384-w76AqPfDkMBDXo30jS1Sgez6pr3x5MlQ1ZAGC+nuZB+EYdgRZgiwxhTBTkF7CXvN" crossorigin="anonymous"></script>
    <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-
```

```
alpha1/dist/css/bootstrap.min.css" rel="stylesheet" integrity="sha384-GLhlTQ8iRABdZLl6O3oVMWSktQOp6b7In1Zl3/Jr59b6EGGoI1aFkw7cmDA6j6gD" crossorigin="anonymous">
    <link rel="stylesheet" href="https://cdn.jsdelivr.net/npm/bootstrap-icons@1.10.2/font/bootstrap-icons.css" integrity="sha384-b6lVK+yci+bfDmaY1u0zE8YYJt0TZxLEAFyYSLHId4xoVvsrQu3INevFKo+Xir8e" crossorigin="anonymous">
    <script>
        $(document).ready(function() {
            // Send the form on enter keypress and avoid if shift is pressed
            $('#prompt').keypress(function(event) {
                if (event.keyCode === 13 && !event.shiftKey) {
                    event.preventDefault();
                    $('form').submit();
                }
            });
            $('form').on('submit', function(event) {
                event.preventDefault();
            // get the CSRF token from the cookie
            var csrftoken = Cookies.get('csrftoken');

            // set the CSRF token in the AJAX headers
            $.ajaxSetup({
                headers: { 'X-CSRFToken': csrftoken }
            });
                // Get the prompt
                var prompt = $('#prompt').val();
                var dateTime = new Date();
                var time = dateTime.toLocaleTimeString();
                // Add the prompt to the response div
                $('#response').append('<p>('+ time + ') <i class="bi bi-person"></i>: ' + prompt + '</p>');
                // Clear the prompt
                $('#prompt').val('');
                $.ajax({
                    url: '/',
                    type: 'POST',
                    data: {prompt: prompt},
                    dataType: 'json',
                    success: function(data) {
                        $('#response').append('<p>('+ time + ') <i class="bi bi-robot"></i>: ' + data.response + '</p>');
                    }
                });
            });
        });
    </script>
</head>
<body>
    <div class="container p-3">
        <h3>ChatGPT Clone</h3>
        <div class="mb-3">
            <form method="post">
                {% csrf_token %}
                <label for="prompt" class="form-label"><strong>Prompt: </strong></label>
                <textarea class="form-control" type="textarea" id="prompt" name="prompt" rows="3"></textarea>
                <br>
                <button class="btn btn-primary" type="submit">Submit</button>
            </form>
        </div>
        <br>
        <div class="mb-3">
            <h6>Response:</h6>
            <div class="container border overflow-auto h-50" id="response"></div>

        </div>
    </div>
</body>
</html>
```

Output:



GFG ChatGPT Clone

To learn more about Chat GPT, you can refer to:

- [7 Best AI Businesses to Start with ChatGPT]
- [ChatGPT vs Google BARD]
- [ChatGPT's History Gone: Data Breach or AI Bug?]

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