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PROJECT : Major Project for Prompt Engineering "AI Assistant Development"

DATE : 21-Oct-2025

SOURCE CODE

```
from flask import Flask, render_template_string, request
from openai import OpenAI
import os
import dotenv

# Load environment variables from .env file
dotenv.load_dotenv()

# Get API key from environment for security
client = OpenAI(api_key=os.getenv("OPENAI_API_KEY"))

app = Flask(__name__)

template = '''
<!doctype html>
<html>
<head>
    <title>AI Assistant</title>
    <style>
        body {
            background: linear-gradient(120deg, #b2fefa 0%, #efeffd 100%);
            color: #4B3869;
```

```
font-family: 'Segoe UI', Arial, sans-serif;

margin: 0;

padding: 0;
}

.container {

    max-width: 520px;

    margin: 50px auto;

    background: #fff;

    border-radius: 20px;

    box-shadow: 0 8px 24px rgba(80,80,80,.09);

    padding: 32px 40px 20px 40px;
}

h2 {

    text-align: center;

    margin-bottom: 18px;

    font-weight: 700;

    color: #6533b4;
}

label {

    font-size: 1rem;

    font-weight: 500;

    margin-bottom: 4px;

    display: block;

    color: #374151;
}

select, textarea, input[type="submit"], input[type="radio"] {

    margin-top: 5px;
}

select, textarea {

    width: 100%;

    font-size: 1rem;
```

```
padding: 8px;
margin-bottom: 14px;
border: 1px solid #bcccdc;
border-radius: 8px;
background: #f3f3fd;
transition: border-color 0.2s;
}
select:focus, textarea:focus {
    border-color: #b16dfa;
    outline: none;
}
textarea {
    resize: vertical;
}
input[type="submit"], input[type="button"] {
    background: linear-gradient(90deg, #8457fe 0%, #6b7dfa 100%);
    color: white;
    font-weight: bold;
    border: none;
    border-radius: 8px;
    padding: 10px 0;
    width: 100%;
    cursor: pointer;
    margin-top: 10px;
    font-size: 1rem;
    box-shadow: 0 2px 10px rgba(140,140,220,.11);
}
input[type="submit"]:hover,
input[type="button"]:hover {
    background: linear-gradient(90deg, #6b7dfa 0%, #8457fe 100%);
}
```

```
.response, .feedback-msg {  
  background-color: #F1F5FA;  
  border-radius: 10px;  
  padding: 15px;  
  margin: 20px 0;  
  color: #3d2d6a;  
  box-shadow: 0 0 6px #eee;  
  font-size: 1.1rem;  
}  
  
hr {  
  border: none;  
  border-top: 2px solid #d6ddfd;  
  margin: 32px 0 10px 0;  
}  
  
.feedback {  
  margin: 10px 0;  
  display: flex;  
  align-items: center;  
  gap: 15px;  
}  
  
.feedback label {  
  font-weight: 500;  
  color: #4B3869;  
}  
  
.feedback input[type="radio"] {  
  accent-color: #6b7dfa;  
  margin-left: 8px;  
}  
  
.thanks {  
  background: #e6e6fa;  
  padding: 8px 17px;
```

```

        border-radius: 7px;
        text-align: center;
        color: #461c6a;
        font-weight: 600;
        margin-bottom: 12px;
    }
</style>
</head>
<body>
    <div class="container">
        <h2>AI Assistant</h2>
        <form method="post">
            <label>Select function:</label>
            <select name="function">
                <option value="question">Answer a Question</option>
                <option value="summarize">Summarize Text</option>
                <option value="creative">Generate Creative Content</option>
            </select>

            <label>Your input/prompt:</label>
            <textarea name="user_input" rows="6" placeholder="Type your question, text to summarize,
or creative idea..." required></textarea>

            <input type="submit" value="Get Response">
        </form>

        {% if response %}
            <hr>
            <h4 style="color:#6b7dfa;">AI Response:</h4>
            <div class="response">{{ response }}</div>
            <form method="post" class="feedback">

```

```

<input type="hidden" name="function" value="{{ function }}">
<input type="hidden" name="user_input" value="{{ user_input }}">
<input type="hidden" name="response" value="{{ response }}">
<label>Was this response helpful?</label>
<input type="radio" name="feedback" value="yes" required> Yes
<input type="radio" name="feedback" value="no" required> No
<input type="submit" name="submit_feedback" value="Submit Feedback">
</form>
{% endif %}

{% if feedback %}
    <div class="thanks">Thanks for your feedback!</div>
{% endif %}
</div>
</body>
</html>
'''

```

Prompt templates for each mode

```

PROMPT_TEMPLATES = {
    "question": [
        "Answer the following question: {}",
        "Please provide a detailed answer: {}",
        "Respond briefly: {}"
    ],
    "summarize": [
        "Summarize this text: {}",
        "List key points of the following: {}",
        "Give a brief overview: {}"
    ],
    "creative": [

```

```

        "Write a story about: {}",
        "Compose a poem about: {}",
        "Generate an idea for a novel based on: {}"
    ]
}

```

```

def get_prompt(function, user_input):
    # Currently just uses the first template. You may randomize this if you like.
    template = PROMPT_TEMPLATES[function][0]
    return template.format(user_input)

```

```

def ai_response(function, user_input):
    prompt = get_prompt(function, user_input)
    completion = client.chat.completions.create(
        model="gpt-3.5-turbo",
        messages=[{"role": "user", "content": prompt}],
        max_tokens=500
    )
    return completion.choices[0].message.content

```

```

@app.route('/', methods=['GET', 'POST'])

```

```

def index():

```

```

    response = None

```

```

    feedback = None

```

```

    function = ""

```

```

    user_input = ""

```

```

    if request.method == 'POST':

```

```

        if 'submit_feedback' in request.form:

```

```

            with open("feedback_log.txt", "a", encoding="utf-8") as f:

```

```

                f.write(

```

```

        f"FUNCTION: {request.form['function']}\n"
        f"USER_INPUT: {request.form['user_input']}\n"
        f"RESPONSE: {request.form['response']}\n"
        f"FEEDBACK: {request.form['feedback']}\n\n"
    )
    feedback = "Thank you for your feedback."
    response = request.form['response']
    function = request.form['function']
    user_input = request.form['user_input']
else:
    function = request.form['function']
    user_input = request.form['user_input']
    response = ai_response(function, user_input)

return render_template_string(
    template,
    response=response,
    feedback=feedback,
    function=function,
    user_input=user_input
)

if __name__ == "__main__":
    app.run(debug=True)

```