

# BOLT IOT ARTIFICIAL INTELLIGENCE TRAINING

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# Problem Statement 2

Develop a 'Personal Health Assistant' code using the fundamental concepts learned as part of the training.

Code written in replit :

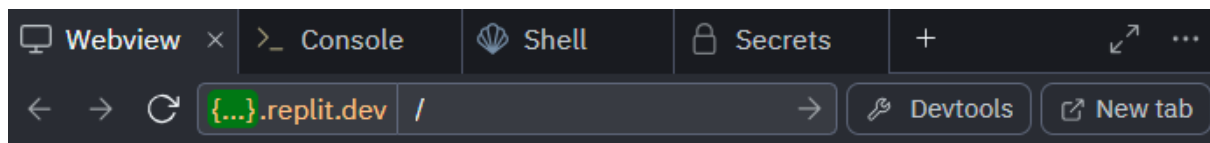
```
main.py > ... Format
1  from boltiotai import openai
2  import os
3  from flask import Flask, render_template_string, request, jsonify
4
5  # Configure OpenAI API key using environment variable
6  openai.api_key = os.getenv('OPENAI_API_KEY')
7
8  # Function to create health assistant responses based on user input
9  def create_health_response(conversation_history):
10     messages = [{"role": "system", "content": "You are a helpful health assistant."}]
11     messages.extend(conversation_history)
12
13     response = openai.chat.completions.create(
14         model="gpt-3.5-turbo",
15         messages=messages
16     )
17     return response['choices'][0]['message']['content']
18
19 # Initialize Flask app and define route for the root URL handling GET and POST
20 app = Flask(__name__)
21
22 @app.route('/', methods=['GET', 'POST'])
23 def index():
24     return render_template_string(''
```

```
main.py > ... Format
25     <!DOCTYPE html>
26     <html>
27     <head>
28         <title>Personal Health Assistant</title>
29         <link href="https://cdn.jsdelivr.net/npm/bootstrap@5.3.0-
alpha1/dist/css/bootstrap.min.css" rel="stylesheet">
30     <script>
31         async function sendUserMessage() {
32             const userMessage =
document.querySelector('#userMessage').value;
33             if (!userMessage.trim()) return;
34
35             const chatBox = document.querySelector('#chatBox');
36             const userDiv = document.createElement('div');
37             userDiv.className = 'alert alert-primary';
38             userDiv.textContent = userMessage;
39             chatBox.appendChild(userDiv);
40
41             document.querySelector('#userMessage').value = '';
42             chatBox.scrollTop = chatBox.scrollHeight;
43
44             const response = await fetch('/chat', {
45                 method: 'POST',
46                 headers: {
47                     'Content-Type': 'application/json'
48                 },
```

```
main.py > ... Format
49         body: JSON.stringify({message: userMessage})
50     });
51
52     const data = await response.json();
53     const assistantDiv = document.createElement('div');
54     assistantDiv.className = 'alert alert-secondary';
55     assistantDiv.textContent = data.response;
56     chatBox.appendChild(assistantDiv);
57     chatBox.scrollTop = chatBox.scrollHeight;
58     }
59     </script>
60 </head>
61 <body>
62     <div class="container">
63         <h1 class="my-4">Personal Health Assistant</h1>
64         <div id="chatBox" class="mb-3" style="max-height: 400px;
overflow-y: scroll;"></div>
65         <div class="input-group mb-3">
66             <input type="text" class="form-control"
id="userMessage" placeholder="Type your message here...">
67             <button class="btn btn-primary" type="button"
onclick="sendUserMessage()">Send</button>
68         </div>
69     </div>
70 </body>
71 </html>
```

```
main.py > ...
72     '''
73
74     # Endpoint for processing chat messages
75     @app.route('/chat', methods=['POST'])
76     def chat():
77         data = request.json
78         user_message = data.get('message', '')
79
80         if 'conversation' not in request.cookies:
81             conversation_history = [{"role": "assistant", "content":
82 "Hello! How can I assist you with your health today?"}]
83         else:
84             conversation_history =
85 eval(request.cookies.get('conversation'))
86
87         conversation_history.append({"role": "user", "content":
88 user_message})
89         assistant_response = create_health_response(conversation_history)
90         conversation_history.append({"role": "assistant", "content":
91 assistant_response})
92
93         response = jsonify({'response': assistant_response})
94         response.set_cookie('conversation', str(conversation_history))
95
96         return response
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Webview:



# Personal Health Assistant

hi

Hello! How can I assist you with your health or wellness today?

i have neck pain

I'm sorry to hear that you're experiencing neck pain. Neck pain can be caused by a variety of factors such as poor posture, muscle strain, or injury. Here are a few tips that may help relieve your neck pain: 1. Apply ice or heat: Alternating between applying ice and heat to the affected area can help reduce inflammation and relieve pain. 2. Practice good posture: Make sure to maintain proper posture while sitting, standing, and sleeping to prevent further strain on

Type your message here...

Send

your neck muscles. 3. Gentle neck exercises: Gentle stretching and range of motion exercises for your neck can help improve flexibility and reduce stiffness. 4. Take over-the-counter pain medication: Non-prescription pain relievers such as acetaminophen or ibuprofen may help reduce neck pain and inflammation. 5. Consider seeing a healthcare provider: If your neck pain persists or worsens, it's a good idea to consult with a healthcare provider for a proper diagnosis and treatment plan. Remember to listen to your body and avoid activities that worsen your neck pain. If you have any concerns, please seek medical attention.

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