

## **Project 2**

### **1 Product Mission Statement**

- For chatbot users and developers
- Who need an intelligent, customizable conversational AI solution
- The ChatGPT 3.5 API-powered chatbot is a versatile artificial intelligence assistant
- That provides appropriate responses and streamlines user interactions
- Unlike rule-based chatbots or less advanced AI models
- Our product offers more advanced natural language processing capabilities with easy integration for diverse applications

### **2 Product User Stories**

1. "As a student when studying at home, I want to ask questions about my coursework because I need immediate clarification on complex topics."
2. "As a housewife when cooking in kitchen, I would like to get in time constructions for dealing with raw meat because I need to finish a delicious and safe dish as soon as possible."
3. "As a non-native English speaker, I can practice conversational English with the chatbot so that I improve my spoken English in local environment."

### **3 MVP**

1. Basic Conversation Functionality: Implement a simple text-based interface for users to input messages and receive responses; integrate the ChatGPT 3.5 API to process user inputs and generate appropriate responses.
2. Single-turn Conversations: Focus on handling single-turn conversations initially, where each user input is treated independently.

### **4 Demo of chatbot**

1.Finish the code of how to call API.

```
1 from openai import OpenAI
2 client = OpenAI()
3
4 messages = []
5
6 system_message = input("What type of chatbot you want me to be?")
7 messages.append({"role":"system","content":system_message})
8
9 print("Alright! I am ready to be your friendly chatbot" + "\n" + "You can now type your messages.")
10
11 message = input("")
12
13 messages.append({"role":"user","content": message})
14 response = client.chat.completions.create(model="gpt-3.5-turbo", messages=messages)
15 print(response.choices[0].message)
```

2. Open Command and enter, “python first.py”.

```
Windows PowerShell
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PS C:\Users\rongh> python firstgpt.py
```

3.Ask questions about Digital Circuits.

```
Windows PowerShell
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PS C:\Users\rongh> python firstgpt.py
What type of chatbot you want me to be?whatever
Alright! I am ready to be your friendly chatbot
You can now type your messages.
how does 4:1MUX work?
ChatCompletionMessage(content='A 4:1 multiplexer, also known as a 4-to-1 mux, is a digital circuit that selects one of the four input lines and directs it to the output line based on the select lines. \n\nThe 4:1 multiplexer has four data input lines, one output line, and two select lines. The select lines are used to determine which of the four data input lines will be passed through to the output. The select lines have two possible states: 00, 01, 10, and 11, corresponding to selecting input line 0, 1, 2, or 3, respectively.\n\nHere is a simple example of how a 4:1 multiplexer works:\n\n- If the select lines are 00, then the data input on line 0 will be directed to the output.\n- If the select lines are 01, then the data input on line 1 will be directed to the output.\n- If the select lines are 10, then the data input on line 2 will be directed to the output.\n- If the select lines are 11, then the data input on line 3 will be directed to the output.\n\nThe output of the 4:1 multiplexer will always be one of the data input lines based on the combination of select lines. This allows for data from multiple sources to be selectively directed to a single output line based on the control signals provided by the select lines.', refusal=None, role='assistant', function_call=None, tool_calls=None)
PS C:\Users\rongh> |
```

The outcomes show the code uses ChatGPT successfully by calling its APIs.