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**Streamlit chatbot output:**

A screenshot of a chat bot

Description automatically generated

**Jarvis Chatbot Code:**

A screenshot of a computer program

Description automatically generated

**Best Practices:**

1. Effective Use of Streamlit's Session State
   1. Applied st.session\_state to keep chat history intact across page refreshes
   2. Resulted in a more seamless user experience with persistent conversations
2. Logical Code Structure
   1. Main chatbot functionality encapsulated within the main() function
   2. Enhanced code readability and simplified future maintenance tasks
3. Standardized Message Format
   1. Adopted a consistent structure for message storage: {"role": role, "content": content}
   2. Streamlined processes for message handling and display throughout the application
4. Real-time Chat History Updates
   1. Implemented immediate addition of new messages to the chat log
   2. Ensured the conversation remained current and responsive at all times
5. Utilization of Streamlit's Chat Components
   1. Incorporated st.chat\_input() for message entry and st.chat\_message() for display
   2. Created a more authentic and user-friendly chat interface
6. User-Centric Input Guidance
   1. Added a clear prompt in the input field: "What is your message?"
   2. Improved user interaction by providing straightforward instructions

**Key Challenges**

1. Understanding Streamlit's execution flow, as it reruns the entire script on each interaction.
2. Managing state to preserve chat history between reruns.