Phase 2 : INNOVATION

CHATBOT USING IBM CLOUD WATSON ASSISTANT

Problem Definition: The project involves creating a chatbot using IBM Cloud Watson Assistant. The goal is to develop a virtual guide that assists users on messaging platforms like Facebook Messenger and Slack. The chatbot should provide helpful information, answer frequently asked questions (FAQs), and offer a friendly conversational experience. The project includes designing the chatbot's persona, configuring responses, integrating with messaging platforms, and ensuring a seamless user experience.
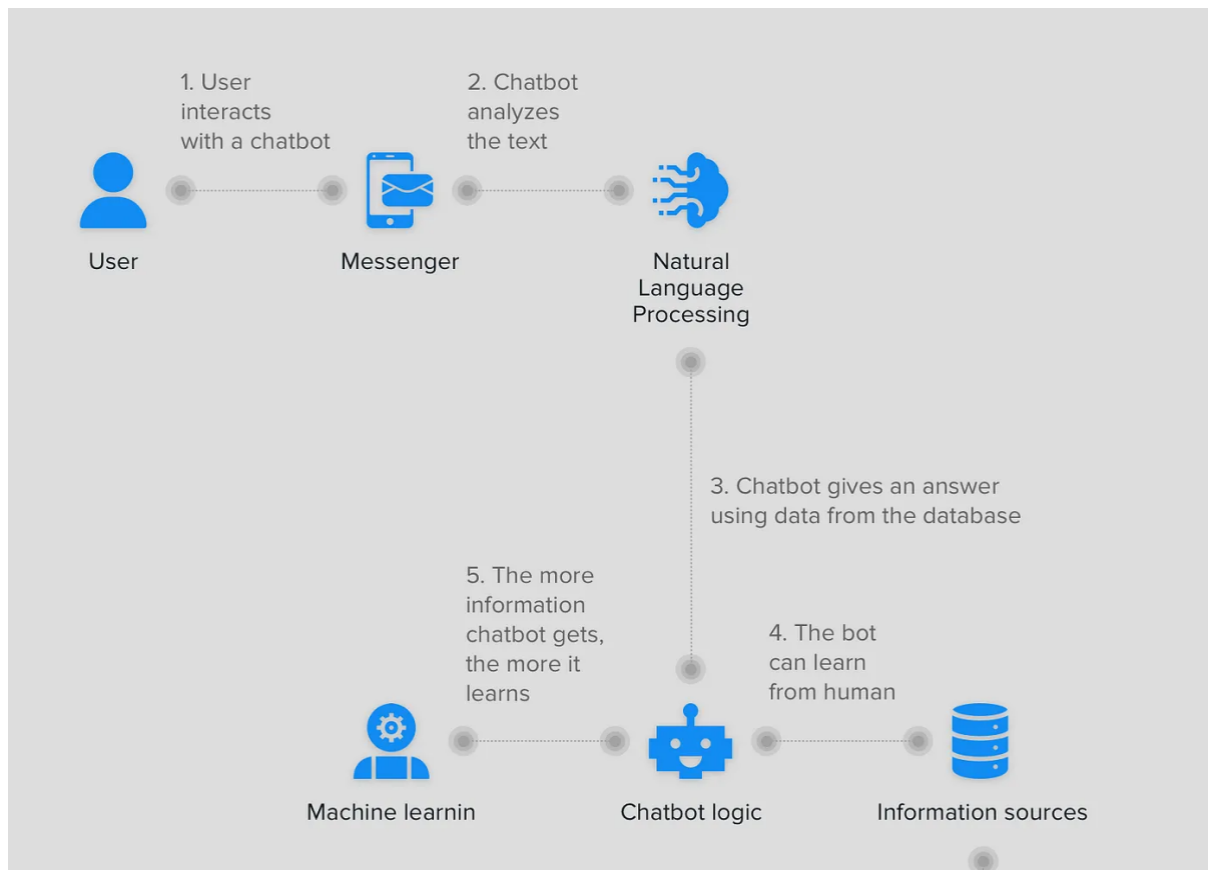
1. Project Planning and Research:

- **Define Objectives:** First, I would clearly define the objectives and scope of the project. What problem is the chatbot meant to solve, and what goals should it achieve in the context of the cloud application?

- **User Research:** I would conduct thorough user research to understand the target audience, their needs, and the types of queries or tasks they might have related to the cloud application.

- **Competitive Analysis:** I'd perform a competitive analysis to study existing chatbots or customer service solutions in the same domain. This research would help identify best practices and potential areas for improvement.

2. Design the Chatbot Persona:

- **Name and Persona:** Based on the research findings, I would define the chatbot's persona, including its name (e.g., "Cloudy") and the desired tone, which, as previously discussed, would be friendly, professional, and empathetic.

- **Style of Communication:** I would specify the style of communication to ensure a consistent and engaging user experience throughout the chatbot's interactions.

3. Design Conversation Flow:

- **User Scenarios and FAQs:** I'd carefully document common user scenarios and frequently asked questions related to the cloud application. These scenarios and FAQs would serve as the foundation for the chatbot's conversation flow.

- **Conversation Flowchart:** I'd create a visual conversation flowchart that outlines how the chatbot will respond to different user inputs. Each dialogue node and its connections would be defined in this chart.

1. User interacts with a chatbot

2. Chatbot analyzes the text

User

Messenger

Natural Language Processing

3. Chatbot gives an answer using data from the database

5. The more information chatbot gets, the more it learns

4. The bot can learn from human

Machine learnin

Chatbot logic

Information sources

4. Response Configuration:

- **Chatbot Platform Selection:** I'd choose a chatbot development platform or framework based on its compatibility with the cloud application and my technical preferences.

- **Create Intents and Entities:** Setting up intents to capture user intentions and entities to extract specific information from user input would be essential for the chatbot's understanding of user queries.

- **Configure Dialog Nodes:** Within the chosen chatbot platform, I'd create dialog nodes, defining the conditions for when each node should be triggered based on user inputs.

- **Write Responses:** Crafting responses for each dialog node is a critical step. The responses would need to be clear, concise, and in line with the chatbot's persona.

- **Test and Debug:** I'd conduct extensive testing of the chatbot's dialog flow to identify any issues and fine-tune responses to ensure the best possible user experience.

5. Platform Integration:

- **Choose Integration Framework:** I'd select a multi-channel integration framework or chatbot platform capable of integrating with popular messaging platforms like Facebook Messenger and Slack.

- **Set Up Platform-Specific Connectors:** To facilitate integration, I'd configure connectors or adapters for each platform, closely following their developer documentation.

- **Handle Authentication and Authorization:** To ensure a secure integration, I'd make certain the chatbot is properly authenticated and authorized to interact with these platforms.

- **Routing and Message Parsing:** To route messages correctly and understand user inputs, I'd implement logic for message routing and parsing.

- Adapting responses to match each platform's capabilities, including text formatting and rich media, is a crucial aspect of the integration process.

6. User Experience and Optimization:

- **Progressive Disclosure:** I'd implement a strategy for progressively disclosing information and options to users, preventing information overload.

- **Empathy and Politeness:** I'd ensure that the chatbot's responses are always polite, empathetic, and professional, enhancing the overall user experience.
- **Testing and Optimization:** Continuous testing and optimization, based on real user feedback and interactions, would be a priority to maintain and improve the chatbot's effectiveness.

7. Deployment:

- **Deploy the Chatbot:** After extensive testing and optimization, I'd deploy the chatbot to the selected messaging platforms or the cloud application to make it accessible to users.

- **Monitor and Maintain:** I would closely monitor the chatbot's performance and user interactions post-deployment, making regular updates and improvements to ensure it remains valuable and user-centric.

8. User Training and Support:

- I'd provide users with training or resources on how to effectively interact with the chatbot and offer support channels for any issues or questions that might arise.