**PROMPT ENGINEERING APPROACH**

The AI Agent is able to carry out certain tasks, such retrieving cryptocurrency prices and responding to requests for language translation, while interacting with users in a natural conversational flow. Since the agent utilizes the LLaMA 3.1 8B Instruct-Turbo model through the Together AI API, prompt engineering aims to make sure the AI can comprehend and react to various forms of user input while meeting task criteria.

1. Non-English Input (Translation)

**User Intent**: The user sends a message in a language other than English.

**Prompt Engineering**: The input is translated to English before sending it to the model, ensuring the agent responds in English.

**Example Input**: "aaj ka mausam kaisa hai"

* **Translation Process**: Translate " aaj ka Mausam kaisa hai?" to English as "How is the weather today?"
* **Example Prompt Sent to LLaMA**: "User: How is the weather today?"

1. General Conversation

The model receives user input directly and uses it to process context. We give the AI a history of past conversations to ensure a smooth conversation flow if the dialogue context is preserved (as kept in the context variable).

**Example Input:** “ What is the price of the bitcoin?”

**Example Prompt sent to LLaMA:** “User: What is the price of the bitcoin”

**CONVERSATIONAL CONTEXT**

Maintaining context is crucial in ensuring that the AI agent can have a coherent conversation across multiple messages. To achieve this:

* The conversation history is maintained and passed to the model. The context is updated with each new message to ensure the conversation remains relevant.
* If the context involves an ongoing conversation about a topic (e.g., cryptocurrency), the prompt will ensure the model knows what has been discussed previously.

Conversational Flow Examples:

Bitcoin related query

* **User Input1:** ”what is the bitcoin price ?”
* **Prompt to the model1:** User: what is the bitcoin price?
* **Model Response1:** Current Bitcoin price: $93,296 USD.

Language translation related query

* **User Input2:** “bitcoin kab shuru hua tha?”
* **Prompt to the model2:** User: When was bitcoin started?
* **Model Response2:** The Bitcoin began on January 3, 2009, when the Genesis Block, also known as Block 0 or Block 1, was mined by Satoshi Nakamoto, the pseudonymous creator of the Bitcoin protocol. However, the concept of Bitcoin started earlier, and the whitepaper describing the Bitcoin protocol was published on October 31, 2008, by Satoshi Nakamoto.

General query

* **User Input2:**” How is the indian stock market performing?”
* **Prompt to the model2:** User: How is the indian stock market performing?

**Model Response2:** The Indian stock market performance can be analyzed through various key indicators.

As of my cut off knowledge in 2023, the Indian stock market has been experiencing fluctuations due to various global and domestic factors

Here are some key points about the Indian stock market performance as of 2023:

\*\*BSE Sensex\*\*: The BSE Sensex, which is a benchmark index for the Indian stock market, has seen a mixed performance in 2023. As of March 2023, it had a YTD (Year-To-Date) return of around 5-6%.

Assumptions and Limitation:

* 1. AI Agent performance varies depending on the model chosen. In the current project we have chosen Meta-Llama-3.1-8B-Instruct-Turbo model(as listed in together.ai)
  2. The translation quality depends on the translation service. (googletranslate)

Might not be able to handle complex words or languages

* 1. Since the response is in English, it might not meet the expectation of the users who would like to interact with their preferred language