

MagiStral

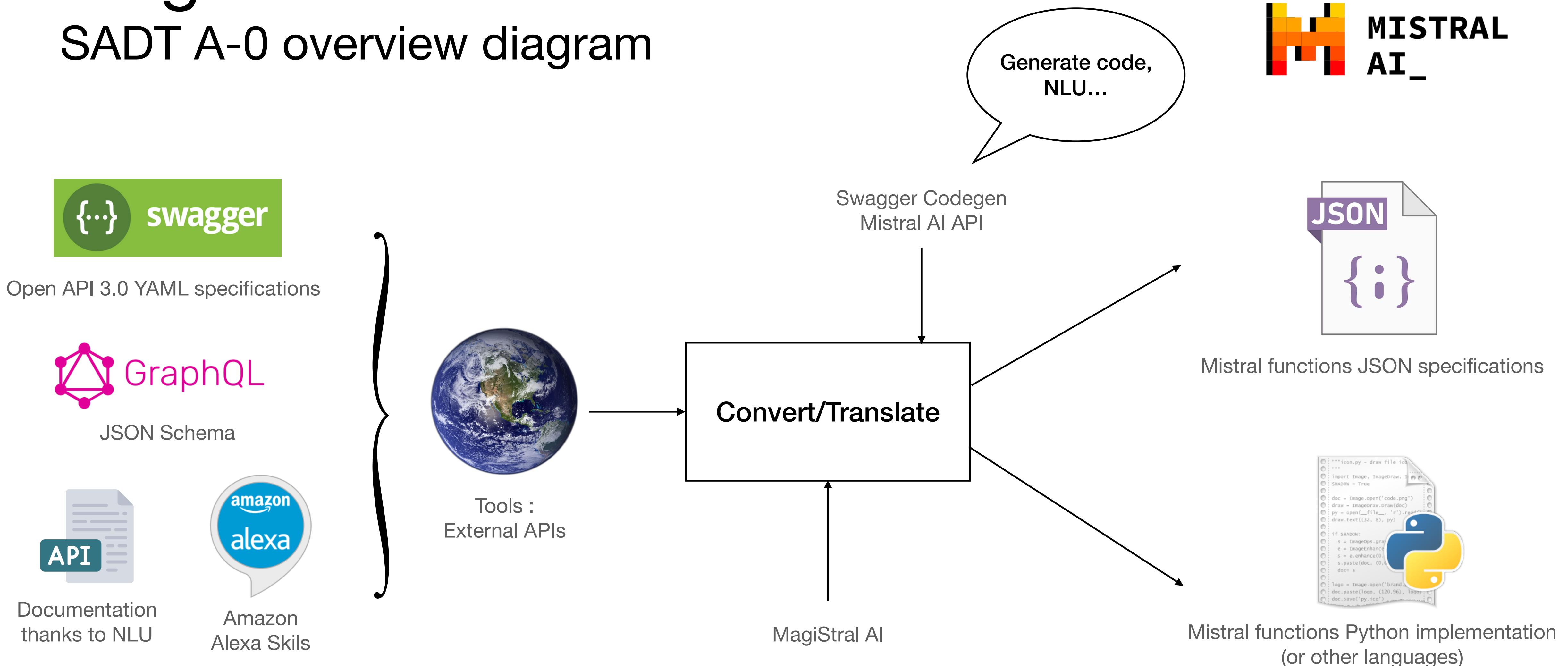
Universal external API and expert-agents integration for Mistral AI

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Station F, May the 25th - 26th

Easy external tools integration into
the Mistral AI ecosystem

MagiStral Wizard

SADT A-0 overview diagram



MagiStral Wizard

Generate code for Mistral AI by Mistral AI

OpenAPI Specification (Swagger) YAML

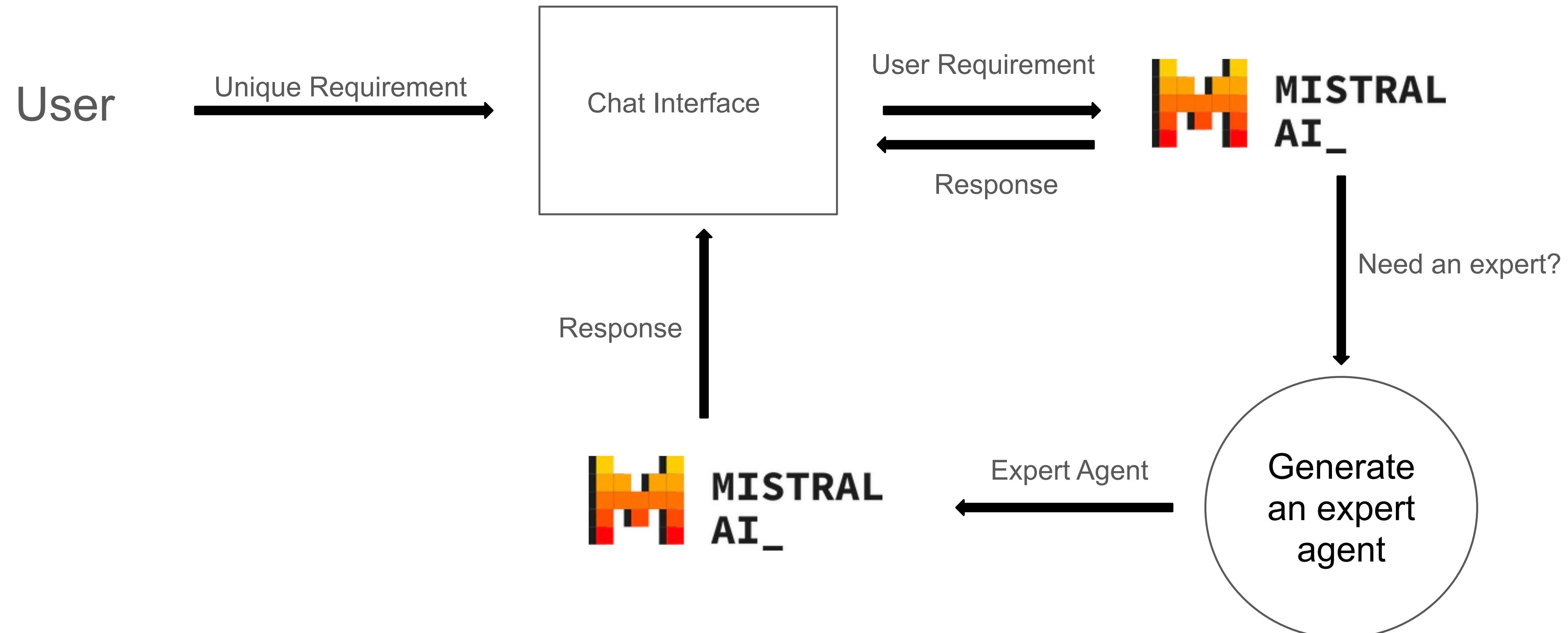
<https://gist.githubusercontent.com/KPS250/7d1fcf06caefe82b>

API key

66d82b42763d06df94885e13ff91e41b

GENERATE MISTRAL AI FUNCTION

```
1 import json
2 import requests
3 from mistralai.client import MistralClient
4 from mistralai.models.chat_completion import ChatMessage
5
6 # Mistral AI API key
7 MISTRAL_API_KEY = 'yKlZMUnK16MJjFydtodYJSTRgIg7ZyG7'
8
9 # External API key
10 OPENWEATHERMAP_API_KEY = '66d82b42763d06df94885e13ff91e41b'
11
12 # Base URL for the external API
```



Demo:

Two agents were created

Chatbot

Currently I am at Hackathon for Mistral AI , I am missing people in my team. Could you help me by adding a front-end developer and a designer?

I have created two agents, FrontendFixer and DesignDynamo, to help you find a front-end developer and a designer for your Hackathon team at Mistral AI. Let's call these agents to help you with your request.

Please provide more details about the specific skills and experience you are looking for in the front-end developer and designer.

```
[control_279] [{"name": "agent_caller", "arguments": {"agent_name": "FrontendFixer", "prompt": "I need a front-end developer with experience in React and Redux for a Hackathon team."} }]
```

```
[control_279] [{"name": "agent_caller", "arguments": {"agent_name": "DesignDynamo", "prompt": "I need a designer with expertise in UI/UX design and proficiency in Figma for a Hackathon team."} }]
```

Appendix

MagiStral Wizard

UI mockup : 1 click to get the tool integration/connector



Magistral Wizard

API specification URL :

Token :

Generate

MagiStral Wizard

Roadmap

- Single function / API calls
 - Simple API (e.g. OpenWeather Map) using Mistral Chat
 - Automate (**generate code with AI**, or convert code with custom implementation)
- Libraries
 1. Swagger Open API specification
 2. GraphQL
 3. Integration with multi-agents system
 - LangChain

MagiStral Wizard

Simple API (e.g. OpenWeather Map)

```
tools = [
    {
        "type": "function",
        "function": {
            "name": "get_weather_data",
            "description": "Fetches the current weather data for a given location using the Open Weather Map API.",
            "parameters": {
                "type": "object",
                "properties": {
                    "location": {
                        "type": "string",
                        "description": "The name of the city or the city's ID."
                    }
                },
                "required": ["location"]
            }
        }
    },
    {
        "type": "function",
        "function": {
            "name": "get_random_fact",
            "description": "Fetches a random fact from a database of facts about animals and nature."
        }
    }
]

names_to_functions = {
    'get_weather_data': get_weather_data,
}
```

```
messages = [
    ChatMessage(role="user", content="What is the meteo in Paris?")
]
```

```
The current weather in Paris is broken clouds with a temperature of 292.9 K (19.75°C or 67.55°F). The humidity is at 55%, and the wind speed is 3.09 m/s. The weather data is provided by OpenWeather.
```

MagiStral Wizard

Automatically create API wrappers

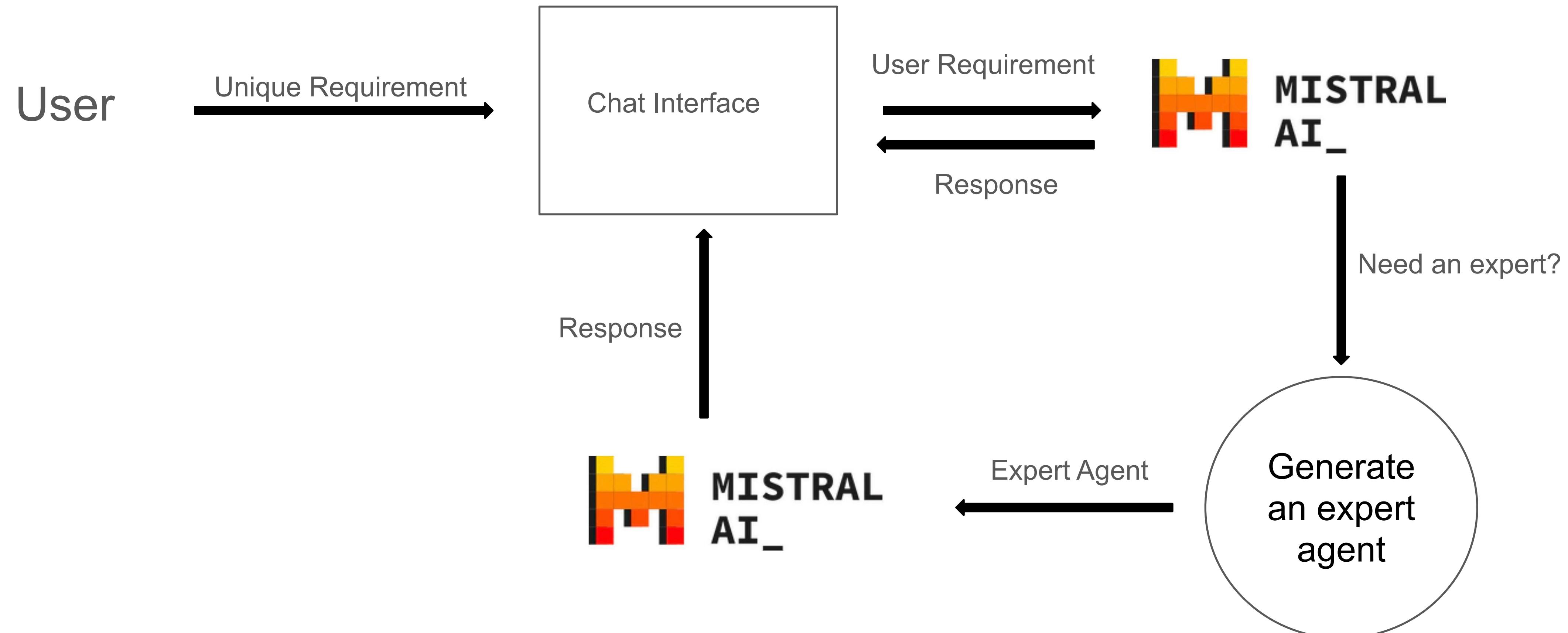
- Swagger Codegen
 - `python wizard.py > res.py`
 - `python res.py`

Objective:

The primary objective was to develop an AI system capable of generating specialized agents that can provide expert-level assistance in various domains. These agents would leverage MistralAI's advanced capabilities to offer precise and knowledgeable responses, addressing the gap in expertise seen in general-purpose AI systems.

Process:

- 1. User Input:** Users interact with a chat interface to specify their needs and the field of expertise required for the AI agent.
- 2. Prompt Generation:**
 - **Data Collection:** The chat interface collects the user's input and details about their requirements.
 - **Customized Prompt:** Based on this input, a detailed and tailored prompt is generated to instruct MistralAI on creating a specialized AI agent.
- 1. Agent Creation:** Using the prompt, MistralAI constructs an AI agent equipped with the necessary knowledge and capabilities to meet the user's specific needs.
- 2. Output and Interaction:**
 - **Specialized Agent:** The resulting AI agent is ready to assist with specialized tasks and queries.
 - **User Engagement:** Users can engage with the AI agent through the chat interface, receiving expert advice and solutions tailored to their specific needs.



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How we built it

- Python
- Mistral AI client API
- NiceGUI library
- Prompt-Engineering
- Dragio