System Specification Document

1. Introduction

The purpose of this document is to provide a comprehensive specification for the development of a system that utilizes Machine Learning and ChatGPT to gather information from Google, summarize it, and engage in a conversation between AI agents to achieve a user-defined goal. The system will generate relevant content, store it in files, and send it to a designated email address. This system will help users in generating ideas and organizing information effectively.

2. System Overview

The system consists of several components that interact with each other to accomplish the defined tasks. The flow of execution is as follows:

1. **Collector**: This component initiates the system and is responsible for performing a Google search based on a user-defined query. The query can be customized before execution. The results of the search are stored in a text file called "query_search_result.txt."

2. **ChatGPT Integration**: The information from "query_search_result.txt" is processed using the OpenAI API through ChatGPT. The API will summarize and restructure the data in a more colloquial manner, which is then saved in the "summary_info_to_agents.txt" file.

3. **Python Hub**: This algorithm serves as the communication hub between two AI agents, "Leo13.py" and "Leo30.py." It shares the topic and goal with the agents. The agents will engage in a conversation, aiming to achieve the specified goal. The user can customize the "goal.txt" file before program execution.

4. **Agents Conversation Logic**:

   - "Leo13.py" writes messages to "Leo30.py" in yellow characters only.

   - "Leo30.py" writes messages to "Leo13.py" in green characters only.

   - The user can customize the agents before execution using the "system_role" parameter.

5. **Goal Achievement**: Once the goal is reached, both agents will collaborate to generate content. The system will create two files, "Youtube_idea.txt" and "AI_news.txt," containing organized and summarized information relevant to the achieved goal.

6. **Send Email**: The "send_email.py" algorithm is activated to send the contents of "Youtube_idea.txt" and "AI_news.txt" to a specified email address, which the user can customize.

7. **Program Termination**: After completing the process, the program ends.

3. Detailed Component Description

3.1. Collector

The "collector.py" component is responsible for the initial step of the system. It interacts with the user to provide a query (e.g., "AI News"). The user can customize the query by providing their own text (e.g., "USER_QUERY"). The component then performs a Google search and saves the gathered information in "query_search_result.txt."

3.2. ChatGPT Integration

The information gathered in "query_search_result.txt" is processed using the OpenAI API and ChatGPT to create a more concise and natural summary of the data. The summarized content is written to the "summary_info_to_agents.txt" file.

3.3. Python Hub

The "Python Hub" algorithm serves as the intermediary between the two AI agents, "Leo13.py" and "Leo30.py." It shares the topic and goal with the agents. The user can customize the "goal.txt" file to set the desired goal for the agents to achieve. Additionally, the user can customize the agents' roles using the "system_role" parameter.

3.4. Agents Conversation Logic

The AI agents, "Leo13.py" and "Leo30.py," engage in a conversation to achieve the specified goal. Messages are written in yellow and green characters, adhering to the conversation logic. The agents' roles can be customized, and the conversation will continue until the goal is accomplished.

3.5. Goal Achievement

Once the goal is reached, both agents collaborate to generate content. The system creates two files:

- "Youtube_idea.txt": Contains organized and summarized information relevant to the goal achievement, possibly suggesting a winning YouTube video idea.

- "AI_news.txt": Contains relevant information and insights about the discourse and the goal achieved.

3.6. Send Email

The "send_email.py" algorithm is activated to send the contents of "Youtube_idea.txt" and "AI_news.txt" to a specified email address. The user can customize the email recipient before executing the program.

4. Conclusion

The system described in this specification document allows users to gather information from Google, summarize it using ChatGPT, engage AI agents in conversation to achieve user-defined goals, and generate relevant content. Additionally, the system provides the flexibility to customize queries, goals, agent roles, and email recipients.

This system can be a valuable tool for users seeking creative ideas and efficiently organizing information, benefiting various domains and scenarios.