**OpenAI examples\_ ChatGPT, DALLE-2,**

Whisper-1 – 5-in-1.txt

**Workflow Documentation: OpenAI Assistant workflow: uploa file, create an Assistant, chat with it!**

**Overview**

This workflow is designed to create a custom AI assistant using OpenAI’s API and a file sourced from Google Drive. The assistant is then available for chat interactions, enabling users to query information based on the uploaded file's content. This example uses a music festival document as a knowledge base.

**Workflow Steps**

1. File Retrieval from Google Drive

* **Get File Node**
  + **Purpose:** Downloads a specific file from Google Drive.
  + **Configuration:**
    - **File ID:** The node is set to retrieve a file using its unique ID.
    - **File Conversion:** Configured to convert the Google Doc to PDF format.
  + **Note:** The file used in this example is a Music Festival document.

2. File Upload to OpenAI

* **Upload File to OpenAI Node**
  + **Purpose:** Uploads the retrieved PDF file to OpenAI, making it available as a knowledge source for creating a custom assistant.
  + **Configuration:**
    - **Purpose Parameter:** Set to "assist" to indicate that the file is to be used for an assistant.
    - **Credentials:** Uses configured OpenAI credentials.

3. Assistant Creation

* **Create new Assistant Node**
  + **Purpose:** Creates a custom AI assistant using the uploaded file as its knowledge base.
  + **Configuration:**
    - **Assistant Name:** "Summer Eclectic Marathon Festival Assistant".
    - **Model:** Configured with the GPT-4 Turbo Preview model.
    - **Instructions:** Detailed instructions ensure the assistant only answers queries related to the music festival and uses the file's content as its exclusive source of information.
    - **Knowledge Retrieval:** Enabled so that the assistant can reference the file content in responses.

4. Chat Interaction

* **Chat Trigger Node**
  + **Purpose:** Captures incoming chat messages from users via a webhook.
  + **Configuration:** The node listens for user input and forwards it to the assistant.
* **OpenAI Assistant Node**
  + **Purpose:** Processes the incoming chat messages using the created custom assistant and generates responses.
  + **Configuration:**
    - **Assistant Reference:** Uses the assistant created in the previous step.
    - **Options:** Additional parameters can be adjusted to fine-tune the assistant's behavior.

5. Workflow Execution and Testing

* **Manual Trigger Node (Optional)**
  + **Purpose:** Provides a manual execution option for testing the workflow.
  + **Configuration:** Currently disabled; primarily used during development and testing phases.
* **Final Output**
  + **Result:** The assistant's response to user queries is sent back through the chat interface.
  + **Flow Summary:**
    1. File is downloaded from Google Drive.
    2. File is uploaded to OpenAI.
    3. A custom assistant is created based on the uploaded file.
    4. Users interact with the assistant via chat.
    5. The assistant generates responses using the knowledge derived from the file.

**Data Flow**

1. **File Retrieval and Upload**
   * The file is fetched from Google Drive, converted if necessary, and uploaded to OpenAI.
2. **Assistant Creation**
   * The uploaded file is used as the basis for creating a custom assistant.
   * Detailed instructions ensure the assistant focuses on relevant content.
3. **User Interaction**
   * Chat messages are captured and forwarded to the assistant.
   * The assistant processes the messages and replies using the custom model.
4. **Output**
   * The assistant’s responses are delivered to the user through the chat interface.

**Setup Instructions**

1. **Credentials:**
   * Ensure that valid credentials for Google Drive and OpenAI are set up in n8n.
   * Verify that the OpenAI credentials include permissions to upload files and create assistants.
2. **File Configuration:**
   * Update the "Get File" node with the correct file ID if you wish to use a different document.
   * Adjust conversion settings (e.g., Google Doc to PDF) as required.
3. **Assistant Configuration:**
   * Modify the assistant’s name, instructions, and related parameters in the "Create new Assistant" node.
   * Ensure the knowledge retrieval feature is enabled to allow the assistant to reference the uploaded file.
4. **Testing:**
   * Enable the manual trigger for testing if needed.
   * Interact with the assistant via the chat trigger and verify that the responses are as expected.
5. **Deployment:**
   * Once testing is complete and the workflow operates as desired, disable the manual trigger.
   * Deploy the workflow to production for live interactions.

**Troubleshooting and Optimization**

* **Performance:**
  + Monitor the workflow execution time, especially during file upload and assistant creation, as these can be time-consuming steps.
* **Error Handling:**
  + Ensure that appropriate error messages are logged if the file retrieval or upload fails.
  + Verify that the assistant creation node handles errors gracefully and provides useful feedback.
* **Scaling:**
  + For higher volumes of interactions, consider adjusting rate limits or utilizing additional resources.