

# Email Chatbot (Llama 3)

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# Overview

The Email Chatbot is an intelligent assistant designed to manage email operations such as connecting to a Gmail account, retrieving and summarizing emails, and performing searches based on user commands. It leverages the Groq Llama 3 model for natural language processing to provide concise summaries of emails. This project combines the power of Python's email handling libraries and AI-driven summarization tools to create a helpful, user-friendly chatbot for managing email communication.

## Features

### Secure Email Authentication:

- Connects securely to Gmail using an app-specific password.
- Validates user credentials, ensuring they comply with Gmail's security policies.

### Email Retrieval:

- Connects to the Gmail IMAP server to fetch emails from the inbox or other specified folders.
- Extracts key details such as subject, sender, and body content.
- Supports retrieval of recent emails with customizable limits.

### Email Summarization:

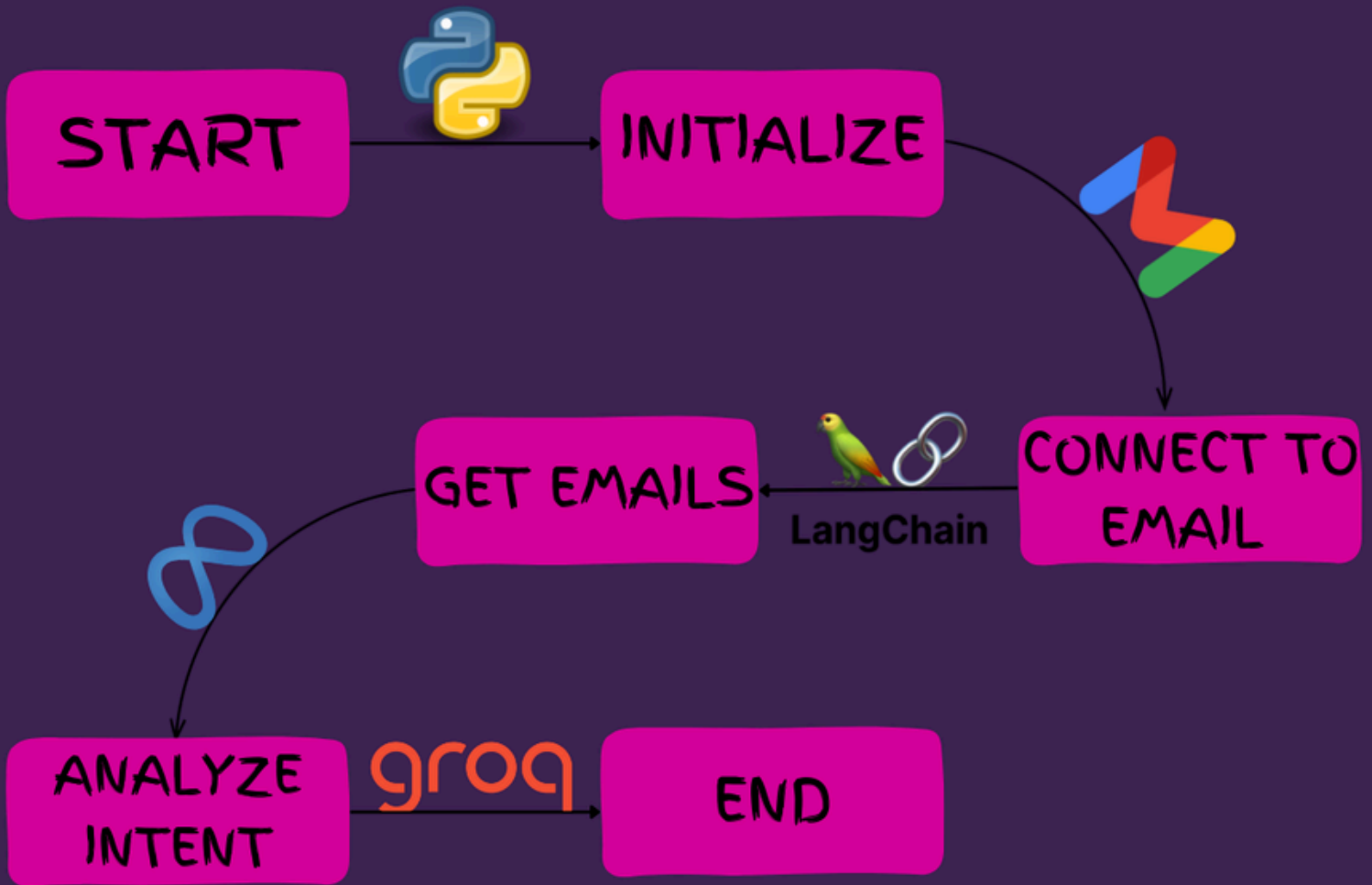
- Summarizes email contents using Groq Llama 3, a large language model, providing a user-friendly summary of messages.
- Processes up to 500 characters from the email body to ensure focused content analysis.

### Search Functionality:

- Filters and searches emails by subject, sender, or body content.
- Summarizes the results of searches for better usability.

### User Interaction:

- Provides a simple command-line interface for users to retrieve recent emails, search emails by keywords, and receive summarized content.
- Offers guidance for available commands and handles unexpected input gracefully.



# Security Considerations

- **App Password:** Uses Gmail App Passwords to avoid storing or using user passwords directly.
- **Environment Variables:** Optionally supports fetching the Groq API key from environment variables for secure deployment.
- **Error Handling:** Comprehensive error handling to ensure robust interaction, including guidance on common issues like incorrect credentials or security settings.

## Possible Enhancements

- **Email Composition:** Extend functionality to draft and send emails directly through the chatbot.
- **Interactive GUI:** Develop a web-based interface for a more user-friendly experience.
- **Advanced Filters:** Add more refined search options based on date, labels, or read/unread status.
- **Email Management:** Implement features to archive or delete emails.

## Conclusion

This Email Chatbot project serves as a foundational tool for automating email retrieval and summarization with AI integration. By utilizing Python and Groq's Llama 3 model, it provides an efficient way to manage inbox summaries and enhance productivity. With further development, this tool can evolve into a comprehensive email management assistant with broader functionalities.

