

This is the list of documentation that the user needed to run chatbot program called 'Lex'

Overview

Lex is a Trading & Scraping Chatbot Agent is a Python application that combines three main functionalities:

1. A chatbot interface for general conversation (powered by LM Studio's local LLM)
2. Twitter scraping capabilities
3. Trading simulation integration with MetaTrader 5

The system consists of three main Python files and a credentials file:

- 'main.py' - The GUI application and main controller
- 'Scrapper.py' - Twitter scraping functionality
- 'Trading.py' - Trading simulation functionality
- 'credentials.json' - Twitter API credentials

File Descriptions

1. main.py

The main application file that provides:

- GUI interface using Tkinter
- Chatbot functionality
- Integration with scraper and trading modules
- Local LLM communication via LM Studio

Key features:

- Scrollable chat interface
- Avatar-based message bubbles
- Threaded operations to prevent UI freezing
- Automatic detection of user intent (chat/scraping/trading)

2. Scrapper.py

Handles Twitter scraping functionality including:

- Authentication with Twitter
- Keyword-based tweet search
- Language filtering
- Result processing

3. Trading.py

Contains trading simulation features:

- Integration with MetaTrader 5
- Technical analysis tools
- Trading strategy simulation

4. credentials.json

Stores Twitter authentication credentials in JSON format.

Installation Guide

1. Install Python

1. Download Python 3.9 or later from [python.org](https://www.python.org/downloads/)
2. Run the installer
3. Check "Add Python to PATH" during installation
4. Complete the installation

2. Install Required Python Packages in terminal

Open a command prompt/terminal and run:

```
pip install tkinter openai python-mt5 tweepy pandas numpy tensorflow  
pip install selenium webdriver-manager transformers torch  
pip install MetaTrader5 pandas-ta matplotlib psutil pywin32
```

3. Install LM Studio (for local LLM)

1. Download LM Studio from [lmstudio.ai] → (https://lmstudio.ai/)
2. Install and launch the application
3. Download the "qwen2.5-7b-instruct" model (or similar) – you can download any model you want as long as it's the same as in the code.
4. Start the local server in LM Studio by typing "lms server start" in command prompt
5. Load the LM studio model by typing "lms load" in command prompt → then type the model you want.

4. Install MetaTrader 5 (for trading)

1. Download MetaTrader 5 from your broker's website or [metatrader5.com]
2. Install and set up your trading account
3. Ensure the MetaTrader 5 terminal is running when using trading features

5. Install Google Chrome

If not already installed:

- Windows: Download from [google.com/chrome]
- macOS: `brew install --cask google-chrome`

Configuration

1. Twitter API Credentials

1. Create a `credentials.json` file in the same directory as the scripts with this format:

```
{  
  "username": "your_twitter_username",  
  "password": "your_twitter_password"  
}
```

2. LM Studio Configuration

- The application expects LM Studio to be running on `http://localhost:1234/v1`
- You can modify this in `main.py` if using a different port or service

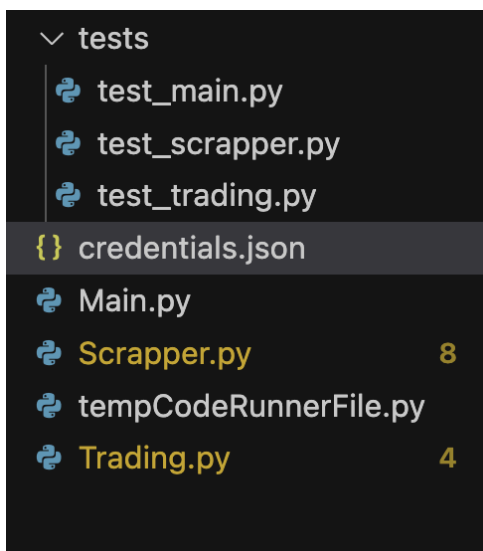
3. MetaTrader5 Account Configuration

Please note that you will get account, password, and server after you register/sign up in the MetaTrader5 application.

Modify the following in `Trading.py`:

```
# Replace with your actual demo account credentials
account = 5035923969 # Your demo account number
password = "7elqSh*k" # Your demo account password
server = "MetaQuotes-Demo" # Your demo server name
```

How to Use the Lex Chatbot



Ensure to put the json file , [main.py](#) , [scrapper.py](#) , [trading.py](#) in one folder

To start the program, run the [main.py](#) file

Main Interface

The application will launch with a chat interface featuring:

- Chat display area (top)

- Message input field (bottom)
- Send button

LIST OF COMMANDS

1. General Chat

- Type any message to chat with the local LLM
- Example: "What is the weather today?"

2. Twitter Scraping

- Trigger words: "scrape", "twitter", "tweets", "news scraping". You can edit these trigger words by changing or adding it in [main.py](#) file. Once the trigger words are mentioned, the program will automatically call the function to scrape.
- Example: "Can you scrape tweets about Bitcoin?"
- When triggered, the bot will ask for:
 - Keyword to search
 - Number of tweets (1-5)
 - Language code (default: "en")

3. Trading Simulation

- Trigger words: "technical analysis", "trading simulation", "run trading"
- Example: "Start trading simulation"
- Note: Requires MetaTrader 5 to be running

4. Exiting

- Type "quit" to exit the application

Limitations

1. Twitter scraping is limited to a small number of tweets (1-5).
2. Trading functionality requires MetaTrader 5 and a valid account.
3. Chat quality depends on the local LLM model being used. The bigger the LLM model file, then the more powerful it is to generate high chat quality. Please consider and adjust with the speed of your devices.
4. The application can only be tested on Windows.