Installation and Usage Manual

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Prerequisites

You will need the following to use the system:

Docker

Reason: for using Milvus Vector Database
Installation for Docker on Windows: https://docs.docker.com/desktop/install/windows-install/
Installation for Docker on Mac: https://docs.docker.com/desktop/install/mac-install/
Installation for Docker on Linux: https://docs.docker.com/desktop/install/linux-install/

Google Chrome

Reason: for the Selenium web scraper
Installation for Google Chrome: https://www.google.com/chrome/

Python 3 that is NOT 3.11

The system's dependencies fail to download with Python 3.11; please use a version of Python 3 from between Python 3.7 and 3.10
It is recommended to use an installation of Python in a virtual environment
Installation for Python 3.10.11: https://www.python.org/downloads/release/python-31011/

OpenAI Account and API key

OpenAI sign up: https://beta.openai.com/signup
Note: This system uses credits tied to your OpenAI account and will not work if your credits are used up or expire. Please use at your discretion.

NewsAPI Account and API key

NewsAPI sign up: https://newsapi.org/register

Optional

A Python virtual environment

It is recommended to install the system in a Python virtual environment such as venv, virtualenv, or conda
Installation for Miniconda: https://docs.conda.io/en/latest/miniconda.html
Installation for virtualenv: https://virtualenv.pypa.io/en/latest/installation.html
Documentation for venv: https://docs.python.org/3/library/venv.html

Steps to Download System

1. Navigate to the GitHub repository of the system:
   https://github.com/A-Yoshimoto-Account/cs4485-stockmarket/tree/main
2. Clone the repository onto your computer

Steps to Start the System

1. Open a terminal and navigate to the project root directory: `cs4485-stockmarket`
2. In the project root directory, create a text file named `.env`
3. In the `.env` file, insert your OpenAI API key and NewsAPI API key, formatted as below:

```
NEWS_API_KEY=insert_your_newsapi_key
OPENAI_API_KEY=insert_your_openai_key
```

4. Start up Docker
   - It is recommended to wait a short while for Docker to setup in order to allow smooth start up
5. Run the `startup.py` file
   - This file will take a few minutes to complete
   - After completing, the terminal output will look similar to the below:

```
Database already has been updated for today
 * Debug mode: off
WARNING: This is a development server. Do not use it in a production deployment. Use a production WSGI server instead.
 * Running on http://127.0.0.1:5000
Press CTRL+C to quit
```

   - There is a possibility for the start up to be delayed due to Docker not being ready yet. Should `startup.py` end with an error, please try running it again.
6. Open up a browser and navigate to http://localhost:5000
   - The web interface will be presented, ready for you to use
7. Once you are finished using the system, press Ctrl+C on the terminal to close the system
8. To use the system once more, repeat from step 4

Using the System

Our system has several sliders and buttons that the user can use:

k Similarity

This slider affects the number of news articles the system will use when generating an answer, from a minimum of 1 to a maximum of 5.
Larger values will increase your OpenAI usage and increase response time

Conversation memory

This slider affects how much of the past conversation the system will use when generating an answer, from a minimum of 1 to a maximum of 5.
Larger values will increase your OpenAI usage and increase response time

Download conversation as CSV file

This button will download a CSV file containing your questions and the system's answers. It will not contain any system messages that appeared during usage.

Upload file as conversation memory

You can use this button after browsing for a downloaded conversation CSV to upload the conversation to the system

Clear Current Conversation Memory

This button will clear the system's internally stored conversation. *It will not clear the screen, so you will still be able to download the entire conversation.*

Clear Entire Conversation

This button will clear the system's internally stored conversation *and* clear the screen. *Please download the conversation first before clicking this button to save the conversation.*