

AI Stock Sentiment Analyzer & Translator

Description

The **AI Stock Sentiment Analyzer & Translator** is an intelligent automation agent designed to empower financial decision-making. It fetches real-time stock news via API, utilizes Generative AI to analyze market sentiment (Buy/Sell), and translates the rationale into a user-specified global language. The final analysis is automatically exported to a CSV or Excel file for easy reporting.

This bot eliminates the manual effort of reading financial news and translating insights, making it ideal for global financial analysts and traders.

Key Features

- Real-time News Fetching:** Connects to any standard news API to retrieve the latest data for specific stock tickers.
- AI-Powered Analysis:** Uses a Generative AI Skill to determine "Buy" or "Sell" sentiment based on news content.
- Multi-Language Support:** Translates recommendations and reasoning into any user-selected global language (e.g., Hindi, Spanish, German).
- Flexible Reporting:** Exports the final analysis to either **Excel** or **CSV** formats based on user preference.
- Interactive User Form:** Provides a simple interface for users to input configuration details without modifying the code.

Components Included

Component Name	Type	Description
Stock Analyzer Agent	Process / Agent	The master agent that orchestrates the entire workflow by triggering the user form and sub-tasks.
Stock_News_Analyzer_User_Form	Form	An interactive interface collecting the API URL, Stock Ticker, Target Language, and Export Format (CSV/Excel).
Fetch_News	API Task	Connects to the provided API URL to fetch raw news data and passes it to the AI Skill for processing.
Generate_Sentiment	AI Skill	The Generative AI model configured to analyze the news and return a JSON response with English and Translated recommendations.

Component Name	Type	Description
Download_Data_To_CSV_Excel	Task Bot	Handles file creation and data writing. Depending on the user's choice, it saves the output to .csv or .xlsx.

Process Flow

- User Input:** The user launches the **Stock Analyzer Agent** and fills in the **Stock_News_Analyzer_User_Form** (Ticker, Language, API URL, Export format).
- Validation:** The bot validates the inputs provided in the form.
- Data Retrieval:** The **Fetch_News** task calls the specified API to get the latest raw news data for the ticker.
- AI Analysis:** The raw data is sent to the **Generate_Sentiment** AI Skill.
 - The AI analyzes the sentiment.
 - The AI translates the recommendation and reason.
 - The AI returns a structured JSON containing: Ticker, English Recommendation, English Reason, Translated Recommendation, Translated Reason.
- Data Compilation:** The agent parses the JSON response.
- Export:** The **Download_Data_To_CSV_Excel** task creates the output file and writes the structured data including a DateTime stamp.

Prerequisites

- Automation Anywhere A360** (v.25 or higher recommended).
- Generative AI License:** Access to Automation Anywhere AI Skills (connected to OpenAI, Azure OpenAI, or Google Gemini).
- Internet Access:** Required for API calls and AI processing.
- Microsoft Excel:** Required if the "Excel" export option is selected.

Input & Output

User Inputs (Form)

- API URL:** Endpoint URL for the financial news source.
- Ticker Name:** The stock symbol to analyze (e.g., AAPL, RELIANCE).
- Translation Language:** Select from a dropdown of global languages (including Indian regional languages).
- Export Format:** Radio button or Dropdown to select "CSV" or "Excel".

Bot Output

A file saved in the default output directory containing the following columns:

- DateTime:** Timestamp of the analysis.
- Ticker:** The stock symbol analyzed.

3. **English Recommendation:** Buy / Sell / Hold.
4. **English Reason:** The logic behind the recommendation in English.
5. **Translated Recommendation:** Recommendation in the selected language.
6. **Translated Reason:** Logic in the selected language.

Setup Instructions

1. **Import:** Download the bot file and import it into your Automation Anywhere Control Room.
2. **Configure AI Skill:**
 - o Navigate to the **Generate_Sentiment** AI Skill.
 - o Ensure your LLM provider (e.g., OpenAI/Azure) API Key is correctly configured in the Connection tab.
 - o *Note: The prompt logic is pre-configured to output specific JSON keys.*
3. **Run:** Open **Stock Analyzer Agent** and click Run.
4. **Fill Form:** Enter the required details in the pop-up form and submit.
5. **Review:** Check your local `My Docs/Bots/Output` folder for the generated report.

Troubleshooting

- **JSON Error:** If the bot fails to parse data, ensure the AI Skill is returning valid JSON. Check the prompt instructions in the AI Skill configuration.
- **API Failure:** Ensure the API URL provided in the form is valid and accessible from the machine running the bot.

Disclaimer: This bot provides analysis based on AI interpretation of news and should not be taken as professional financial advice. Always verify data before trading.