AUTOMATED CRYPTO & STOCK ANALYZER

SIMPLIFYING TECHNICAL ANALYSIS

PRESENTED BY:
MELEIK HYMAN
FOUNDER & AI/ML ENGINEER
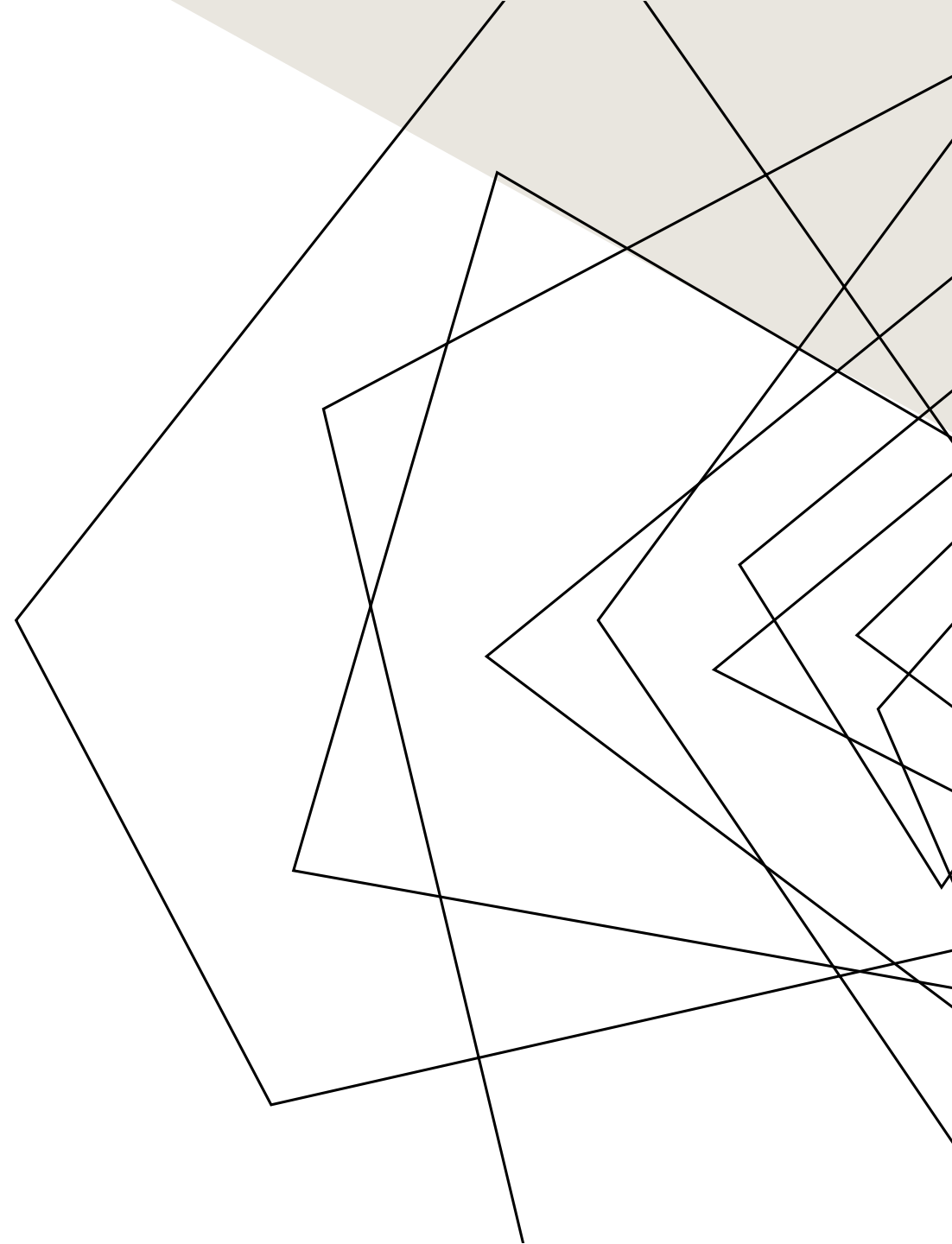
ABOUT ME

Name : Meleik Hyman

Founder & AI/ML Engineer

- 7 years + coding and working in applied ML & automation

- Specialized in **RAG pipelines**, **agentic systems**, and **data engineering**

- Passionate about building AI tools that simplify decision-making

Publication

- *"Data Analytics to Evaluate the Impact of Infectious Disease on Economy: COVID-19 Case Study"* (2021)

WHY THIS TOOL WAS BUILT

PROBLEM

- Traders spend hours doing manual charting and technical analysis

- Inconsistent methods lead to missed opportunities and late entries

- Most tools overwhelm users instead of simplifying insights

VISION

- Create an **automated analyzer** that delivers clear, data-driven signals in seconds

- Blend **technical + fundamental analysis** for both stocks and crypto

- Help traders act faster, with confidence and precision

CORE VALUES

- Built to remove manual charting and automate technical analysis for traders.

- Instantly identifies support and resistance zones, moving averages, and trend direction.

- Combines technical, fundamental, and sentiment data to improve accuracy of forecasts.

- Generates full market insights and one-year price projections in seconds.

- Simple input, enter a stock or crypto symbol to get instant analysis.

- Designed for both beginners and Mid-level traders with no coding required.

- Continuously evolving with upcoming features like options-chain analytics, AI-assisted trade notes, and portfolio tracking.

PRODUCT DEMO

SETUP AND REQUIREMENTS

- Visit the GitHub release page and download the latest version of the analyzer.

- Extract the downloaded file to your local system.

- Ensure **Python 3.13+** is installed (or use the included executable version).

- Open the folder and run the startup file to launch the tool.

- Follow on-screen prompts to enter a stock or crypto symbol for analysis.

- Verify the tool loads charts and price projections correctly.

- Reference the included **README** for troubleshooting or configuration details.

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FAQ

How Options Data is Retrieved

1. Entry point: `evaluate_options()` in `src/data/options_analysis.py`:
- Called with symbol, current price, and optional 52-week high
- Uses `YahooClient` to fetch options

2. Options fetching:
```
expirations = yh.options()  # Gets all available expiration dates
chain = yh.option_chain(expiration)  # Gets the full options chain
```

3. Processing:
- Selects latest current-year expiration and first next-year expiration
- Filters call options with strikes between current price and current price + $10
- Returns contract symbol, strike, bid, ask, last price, IV, volume, open interest

4. Data handling:
- Converts NaN to 0.0
- If bid/ask are missing, estimates bid/ask from last price
- Validates types and floats/ints

How yfinance Integration Works

1. Wrapper: `src/data/yahoo_client.py`
- Encapsulates `yf.Ticker(symbol)`
- Adds rate limiting and caching

2. Features:
- Rate limiting: token bucket (2 req/s, set in `constants.py`)
- Caching: stores results in-memory per ticker instance
- Retries: exponential backoff, 6 attempts
- Error handling: wraps yfinance calls with retries

3. Dependency setup (`src/config/dependencies.py`):
```
try:
    import yfinance as yf
    YFINANCE_AVAILABLE = True
except ImportError:
    YFINANCE_AVAILABLE = False
```
- Checks availability before use; GUI shows an install message if missing

4. Package version (`requirements.txt`):
```
yfinance>=0.2.18
```
This adds rate limiting, retries, and caching on top of yfinance to stabilize options data retrieval.

macOS

Stock Technical Analyzer macOS v2.0.1 (Latest)

Release date: 2025-10-26
What's new
Matplotlib-only charts: Removed Plotly/Kaleido to eliminate headless Chrome issues and "incorrect header check" errors.
Faster, cleaner build: Pruned invalid hidden imports and simplified hooks (Flet, Pandas, yfinance).
Startup fix: Added missing stdlib cmath import that caused bundled startup failures.
Prebuilt Matplotlib font cache: Reduces first-render delay on fresh systems.
Verified single-instance behavior with lock-file cleanup

▼ Assets 4

⬡ Stock.Analyzer-2.0.1-macOS.zip	sha256:c2270fd341ed5d... ⧉	74.8 MB	yesterday
▯ Source code (zip)			2 days ago
▯ Source code (tar.gz)			2 days ago
⊘ Release attestation (json)			2 days ago

https://github.com/HelloHyman/Automated-Crypto-and-Stock-Analyzer-/releases

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Source code (zip)			2 days ago
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Click Stock.Analyzer-2.0.1-macOS.zip which will start the download

macOS
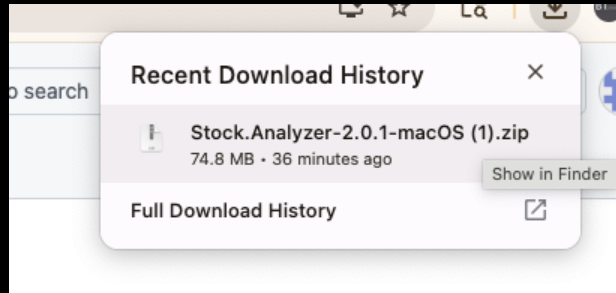
Click "show in folder"
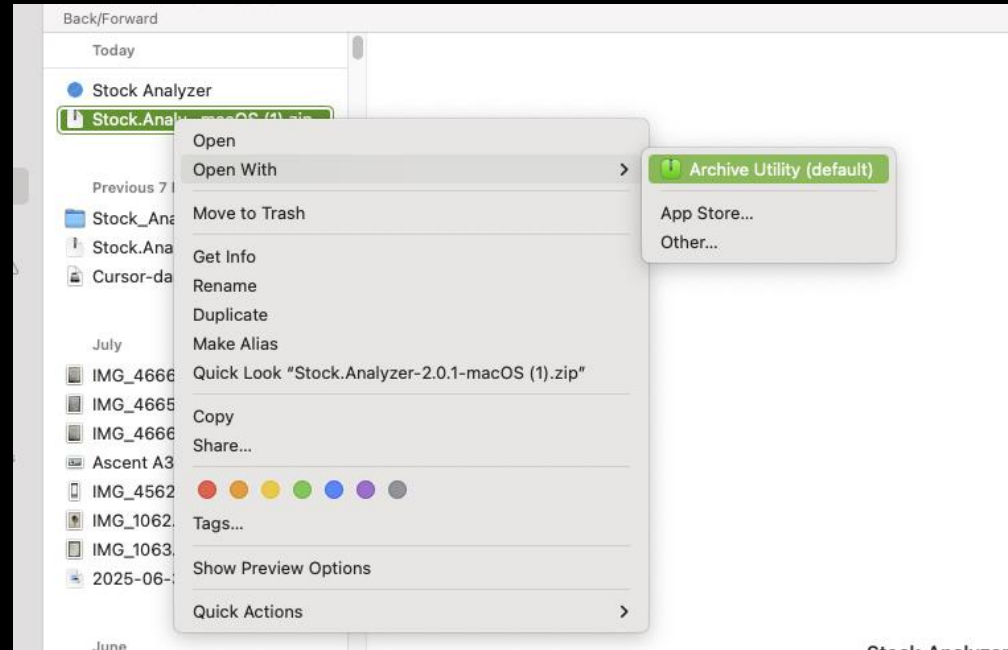
"Open With" -> "Archive Utility"

macOS
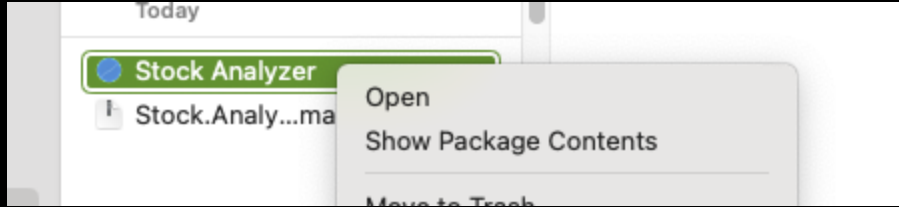
After extracting Click "Open", If you get a Warning.
Do the following:

Option 1 — Temporary / Local Bypass (for testing)

Instruct users to manually allow the app:

1. Run the app — it will show the "malware" message.
2. Go to **System Settings → Privacy & Security**.
3. Scroll down and click **"Open Anyway"** next to your app name.
4. Click **Open** when prompted.

That's only needed once per app version.
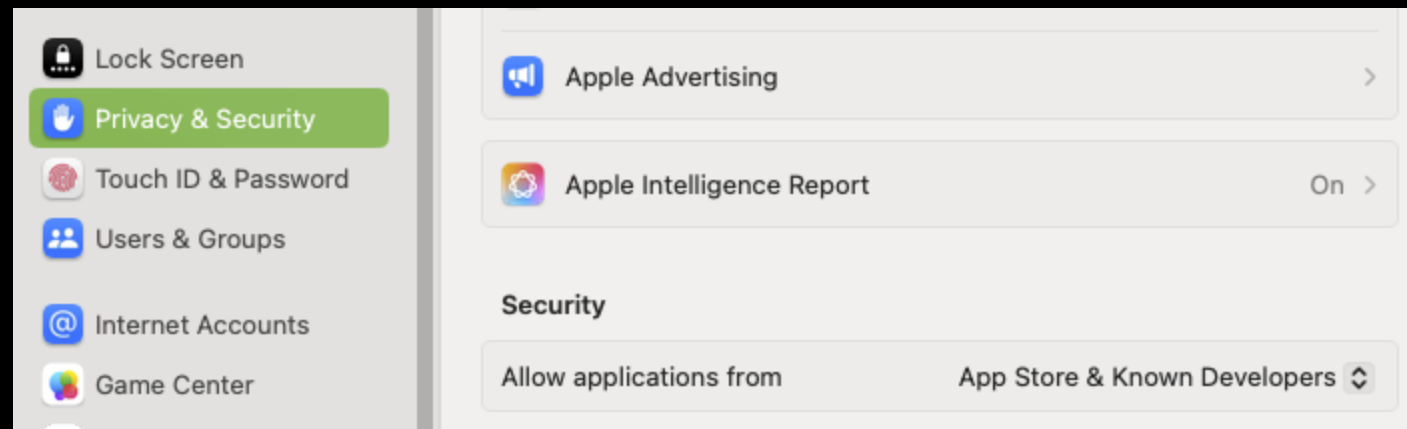
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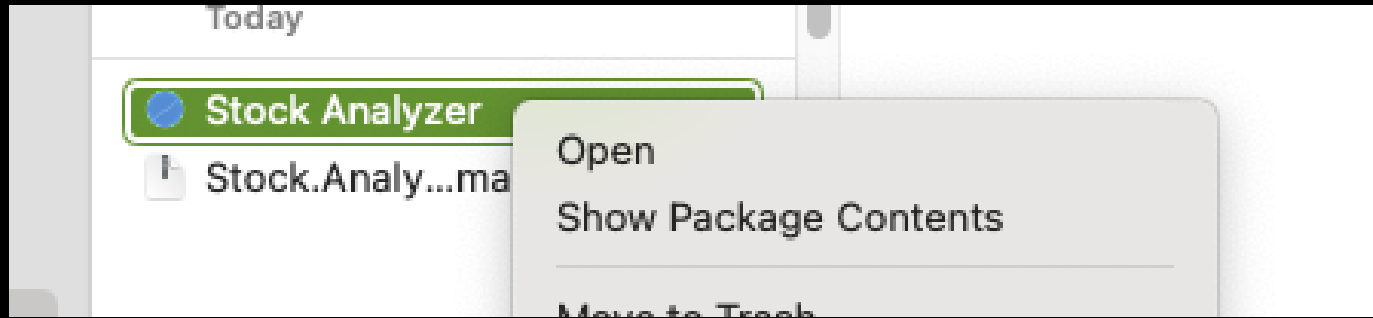
Then go back and click Open. Program take about 1 minute to open on MAC

Stock & Crypto Automated Analysis

Comprehensive analysis with fundamentals, options, and technical indicators

Stock/Crypto Symbol

🔍 e.g., AAPL, BTC-USD, ETH-USD   📊 **Analyze Stock**

Enter a stock or crypto symbol to get started
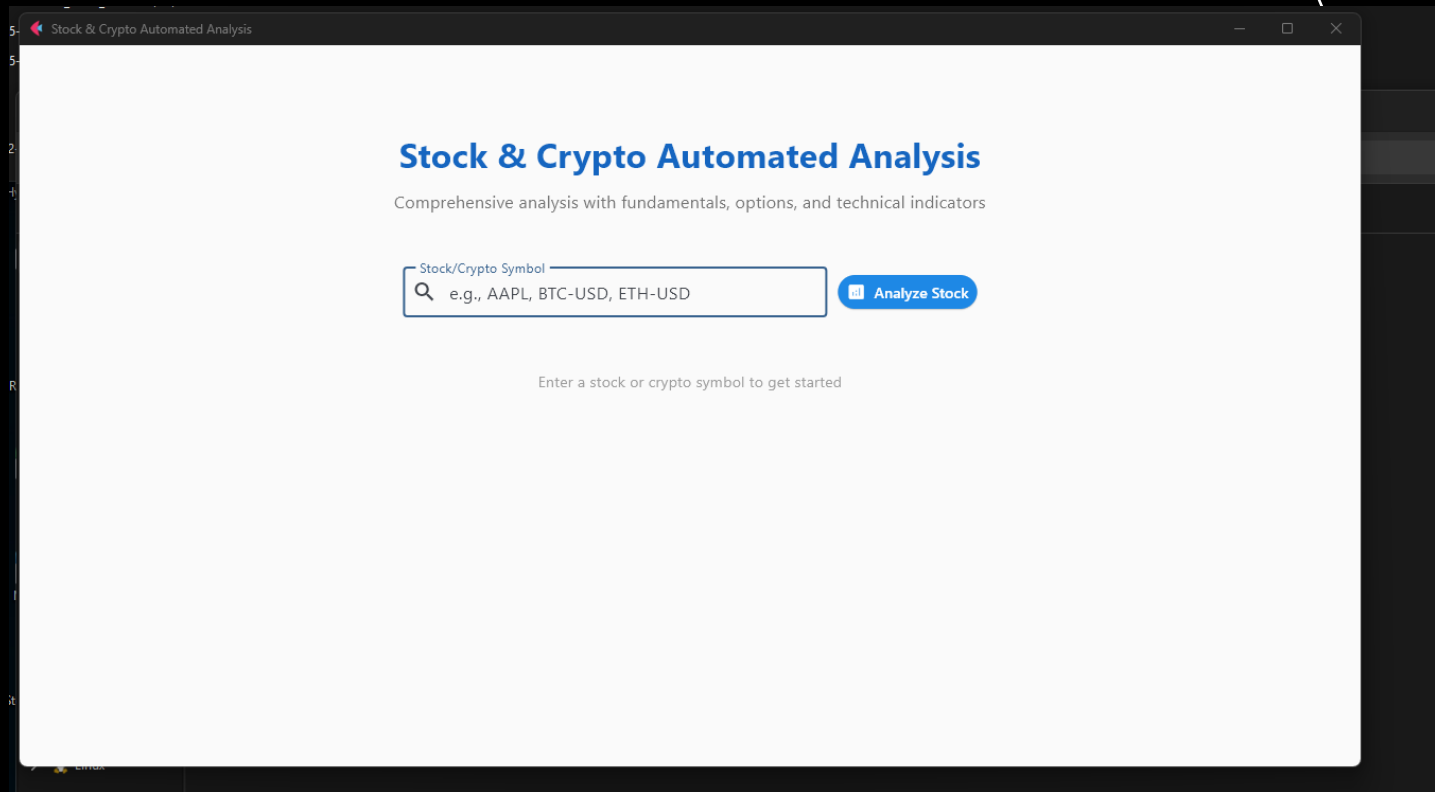
Enter Any stock or crypto happy trading

Stock Example : AAPL
Crypto: BTC-USD

Windows OS

Stock Technical Analyzer v2.0.1 Pre-release

Compare

HelloHyman released this 3 minutes ago   🔒 Immutable   🏷 2.0.1   ⟲ ed7f1ec ✓

Stock & Crypto Automated Analysis - Application Overview and Fixes
Application Overview
Analyzes stocks and cryptocurrencies with fundamentals, technicals, options, and forecasting.
Core Features
Fundamental Analysis: Profit margins, revenue growth, debt ratios, cash flows
Technical Analysis: Candlestick charts, moving averages (e.g., 20-day, 50-day, 100-day), RSI, support/resistance
Options Analysis: Call options for current- and next-year expirations
Social Sentiment: Bullish vs bearish signals
Price Forecasting: Projections from technical indicators
Interactive Charts: Moving averages, indicators, and volume
Technical Stack
Frontend: Flet (Python)
Data: yfinance
Charts: Plotly + kaleido
Build: PyInstaller
Package: Windows executable with console=False

▼ Assets 3

⊚ StockCryptoAnalyzer.7z   sha256:f9bad35ec3c024d76e6c6a7690e60... ⧉   73.6 MB   8 minutes ago
📄 Source code (zip)   15 minutes ago
📄 Source code (tar.gz)   15 minutes ago

https://github.com/HelloHyman/Automated-Crypto-and-Stock-Analyzer-/releases

Stock Technical Analyzer v2.0.1

HelloHyman released this 3 minutes ago 🔒 Immutable 🏷 2.0.1 ⦿ ed7f1ec ✓

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▼ Assets 3

📦 **StockCryptoAnalyzer.7z**	sha256:f9bad35ec3c024d76e6c6a7690e60... 📋	73.6 MB	8 minutes ago
📄 **Source code** (zip)			15 minutes ago
📄 **Source code** (tar.gz)			15 minutes ago

Click StockCryptoAnalyzer.7z which will start the download, Save to PC, Please Avoid saving to OneDrive may case permission error

☑ 📁 StockCryptoAnalyzer.7z   10/25/2025 9:42 PM   Compressed Archi...   75,850 KB
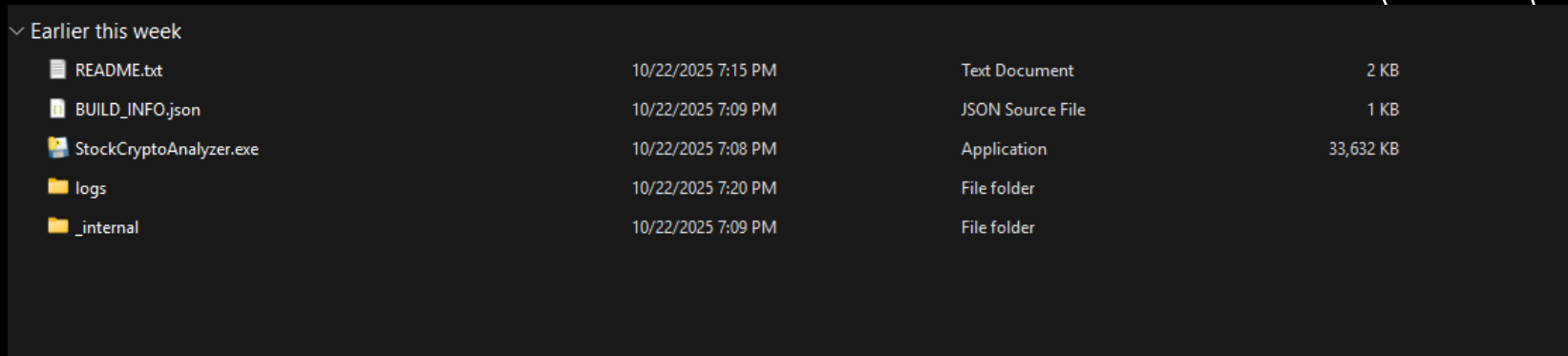
Once downloaded Right Click "Extract all"

← 📁 Extract Archive   ✕

Select a Destination and Extract Files

Files will be extracted to this folder:

C:\Users\melik\Downloads\StockCryptoAnalyzer   Browse...

☑ Show extracted files when complete

Extract   Cancel
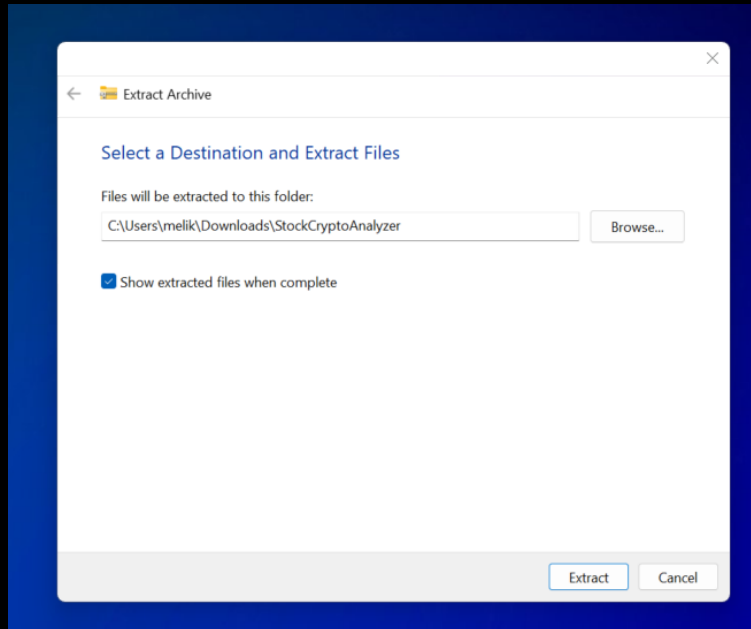
Click "Extract"

📁 StockCryptoAnalyzer   10/23/2025 9:00 PM   File folder

Once Complete click into "StockCryptoAnalyzer" folder

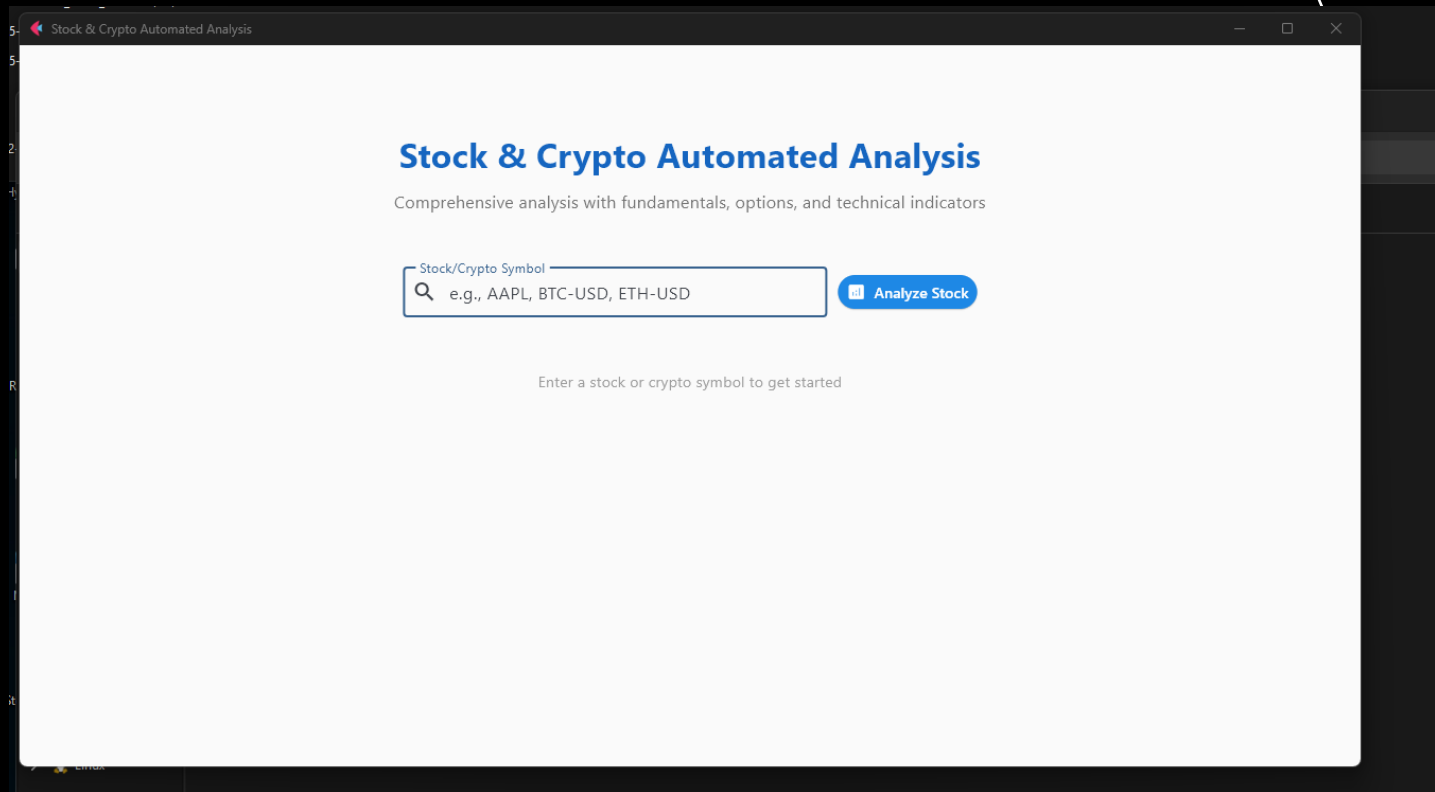| Earlier this week			
README.txt	10/22/2025 7:15 PM	Text Document	2 KB
BUILD_INFO.json	10/22/2025 7:09 PM	JSON Source File	1 KB
StockCryptoAnalyzer.exe	10/22/2025 7:08 PM	Application	33,632 KB
logs	10/22/2025 7:20 PM	File folder	
_internal	10/22/2025 7:09 PM	File folder	

Right Click "Open" Give the Program 10-20 seconds to start

Windows protected your PC

Microsoft Defender SmartScreen prevented an unrecognized app from starting. Running this app might put your PC at risk.

More info

Don't run

Windows protected your PC

Microsoft Defender SmartScreen prevented an unrecognized app from starting. Running this app might put your PC at risk.

App: StockCryptoAnalyzer.exe
Publisher: Unknown publisher

Run anyway   Don't run

You may get a windows warning, click 'More info'

Then 'Run Anyway'

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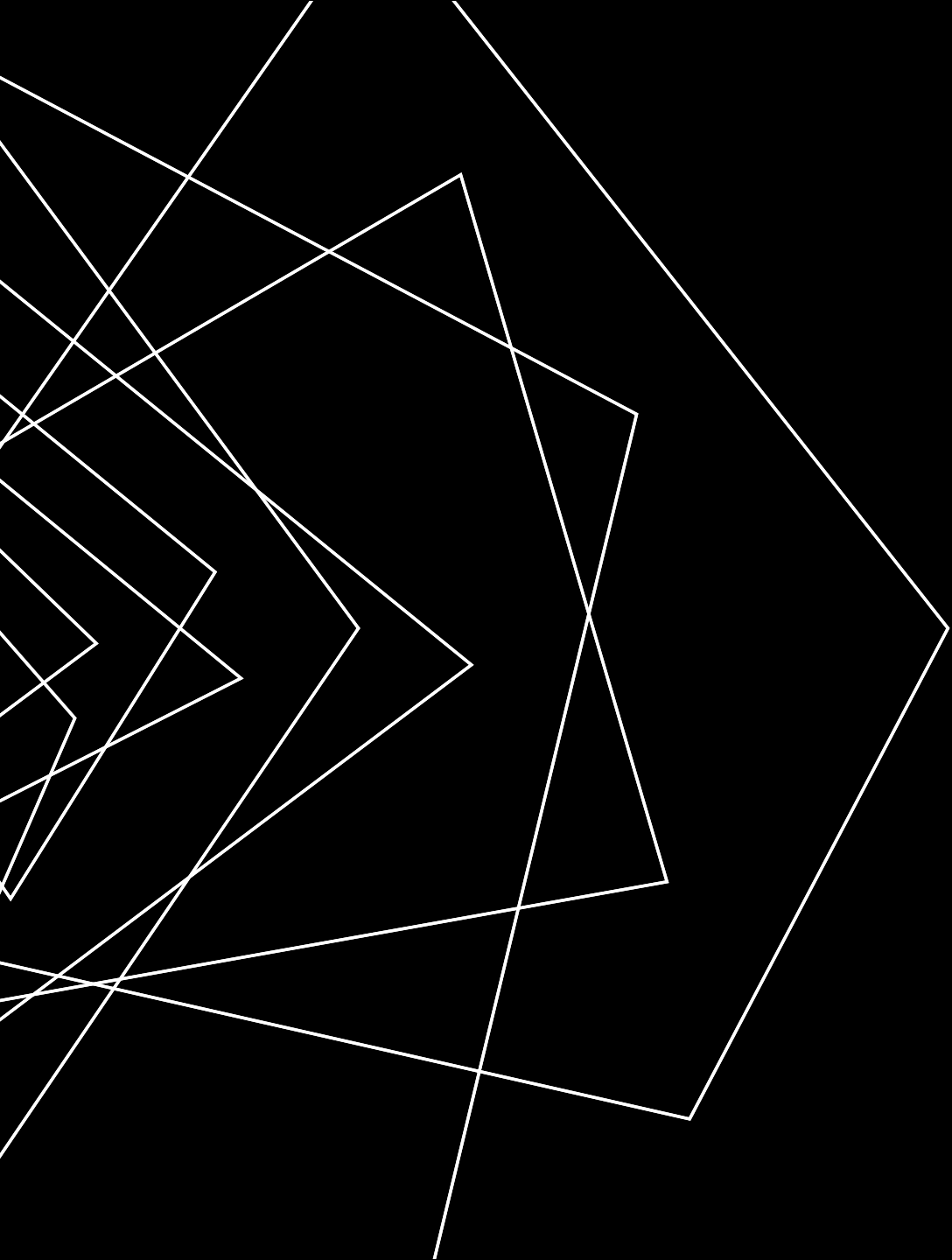
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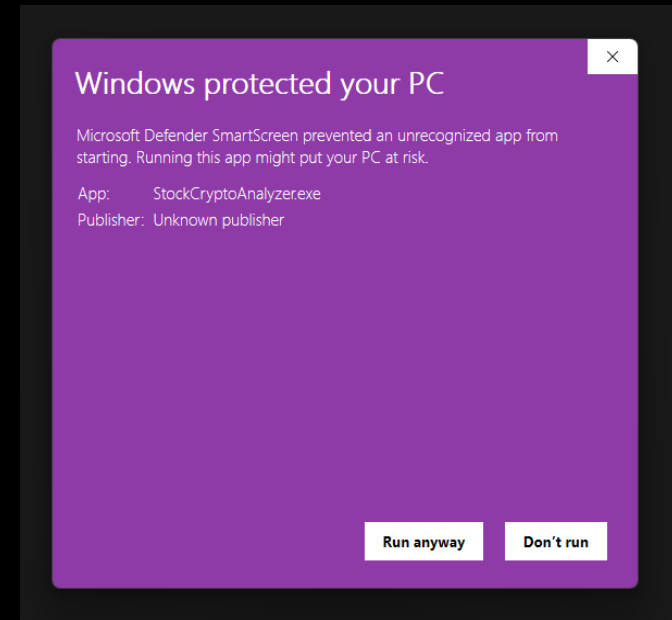
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Stock Example : AAPL
Crypto: BTC-USD

THANK YOU