Date: May 29, 2025 **Authors:** Milad Tootoonchi & Makka Dulgaeva

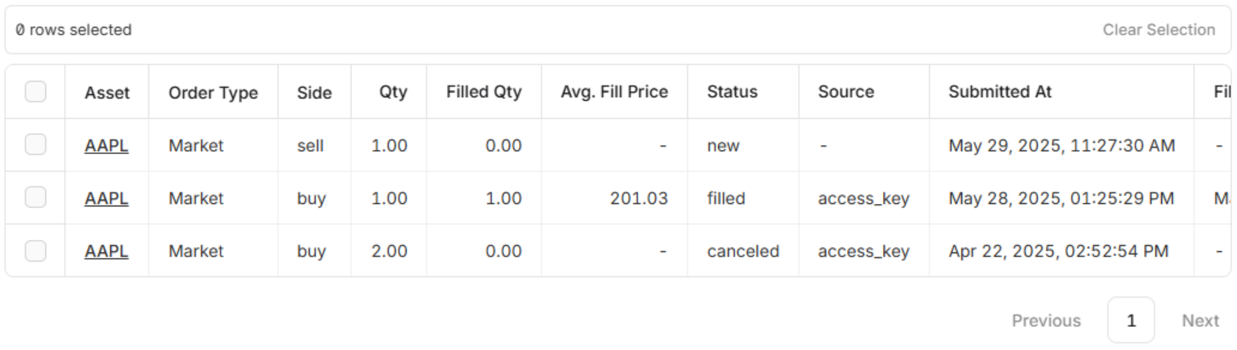
Live Trading Platform – Project Status Report

Project link (Git): https://github.com/MiladTootoonchi/Live-Trading-Platform/tree/main

In line with NMBU's guidelines on the use of artificial intelligence (AI), we confirm that AI tools were used to suggest content and structure in this status report. All core content, analysis, and final decisions are our own. AI-generated input has been reviewed for accuracy and is not the sole source of any factual information. This follows NMBU's standards for academic integrity and transparency.

Current Status

- The programs API calls are functional. The program can get positions and order information and post new orders.



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	Asset	Order Type	Side	Qty	Filled Qty	Avg. Fill Price	Status	Source	Submitted At	Fil
	AAPL	Market	sell	1.00	0.00	-	new	-	May 29, 2025, 11:27:30 AM	-
	AAPL	Market	buy	1.00	1.00	201.03	filled	access_key	May 28, 2025, 01:25:29 PM	M
	AAPL	Market	buy	2.00	0.00	-	canceled	access_key	Apr 22, 2025, 02:52:54 PM	-

Previous 1 Next

Figure 1 This figure displays the market orders executed in Alpaca Paper Trading. The orders shown above were submitted and subsequently canceled via our program's command-line interface (CLI).

- Manual Order creation is managed via terminal arguments (by typing "python main.py –order" in terminal main repository)
- Manual Order cancellation is additionally added and managed via terminal arguments (by typing "python main.py –cancel")
- Live trading loop (with argument –live {number of iterations}) needs more work. This loop is hardcoded and needs dynamic sleep. To clarify, making the sleep duration between each loop based on runtime conditions rather than being a fixed value.

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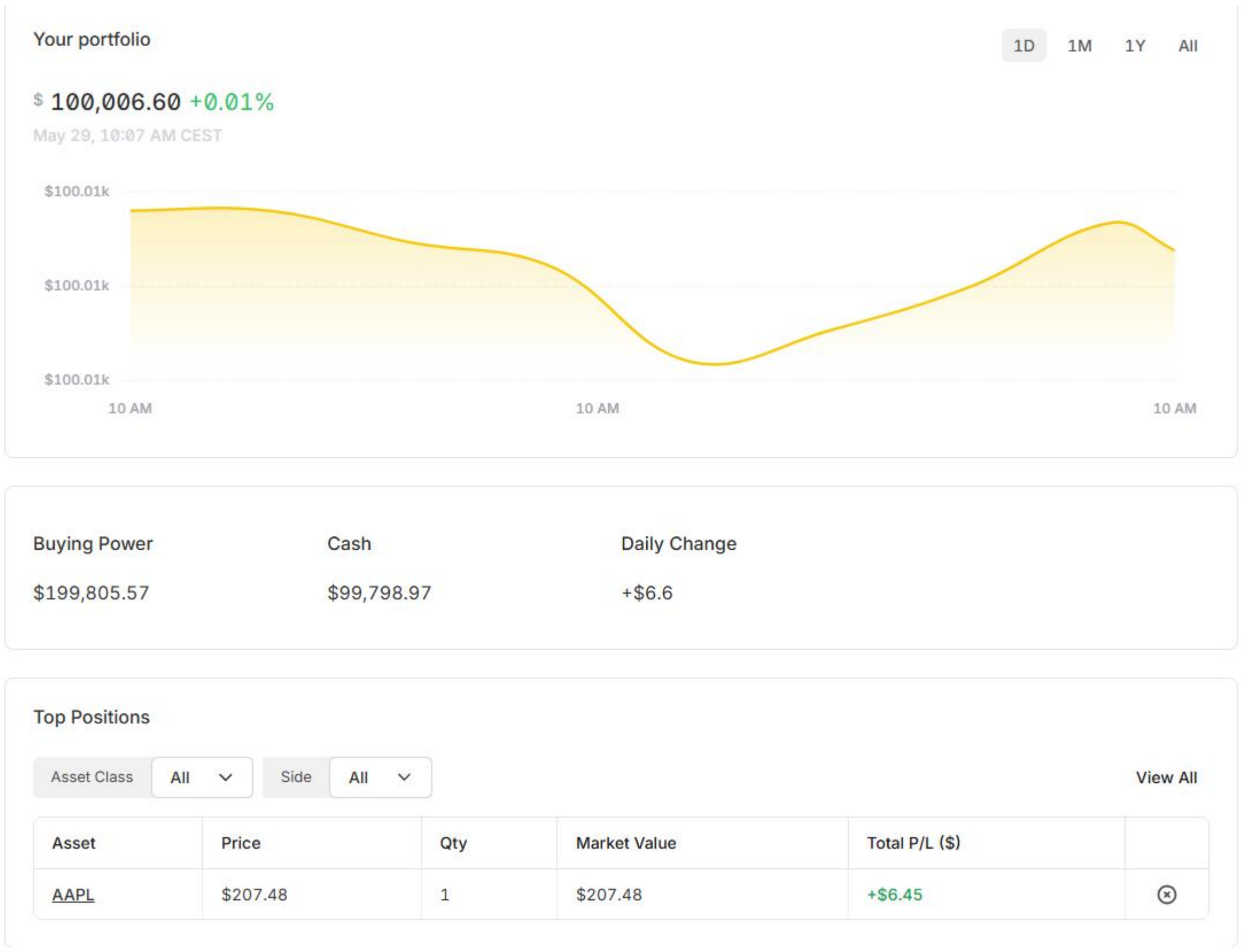
Observations from Alpaca Dashboard

Environment:	Paper Trading
Account Value:	~$100,006.60
Top Position:	AAPL (Qty: 1m Value: $207.48, P/L: +$6.45)
Recent Activity:	Market buy orders filled near $201



Your portfolio

$ 100,006.60 +0.01%

May 29, 10:07 AM CEST

Buying Power	Cash	Daily Change
$199,805.57	$99,798.97	+$6.6

Top Positions

Asset	Price	Qty	Market Value	Total P/L ($)	
AAPL	$207.48	1	$207.48	+$6.45	⊗

Figure 2 This figure illustrates the movement of AAPL stock at the time of purchasing one share. As indicated under Total P/L ($), the trade yielded a profit of $6.45.

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Strategy Status

Implemented: rule_based_strategy

- Sells at > 2% gain or < -1.5% loss.
- Buys if change < -3% and return is negative.

Planned Improvements:

- Add new strategies (e.g., momentum)
- Allow strategy selection via CLI (Arguments in the terminal)
- Add a majority voting strategy (uses multiple strategies)
    - Will be the default strategy to use.
- Improve risk control
    - learning from past incidents or near misses
    - AI: Predictive analytics to identify emerging risks.

Technical Issues & TODOs

Task	**Priority**	**Notes**
Add more strategies	High	Use modular structure in strategy.py
Tune sleep logic	Medium	Add arguments to set sleep duration, or wait till orders are filled
Improve config fallback	Medium	Handle missing / invalid config better
Add tests	Low	Add tests for strategy and order logic
Async robustness	Medium	Use try/except in async loops
Add logging	Medium	Replace print() with structured logging

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Suggestions for Next Steps

1. Strategy Enhancements

- Add and test strategies
- Build a strategy manager

2. Live Loop Improvements

- Add CLI flag for sleep duration
- Consider event-driven logic

3. Error Handling

- Retry failed requests
- Use logging with alerts

4. CLI Enhancements

- Improvement of prompts
- Validate symbols with API

5. Automation & Scaling

- Trade multiple symbols
- Use multiprocessing or queues