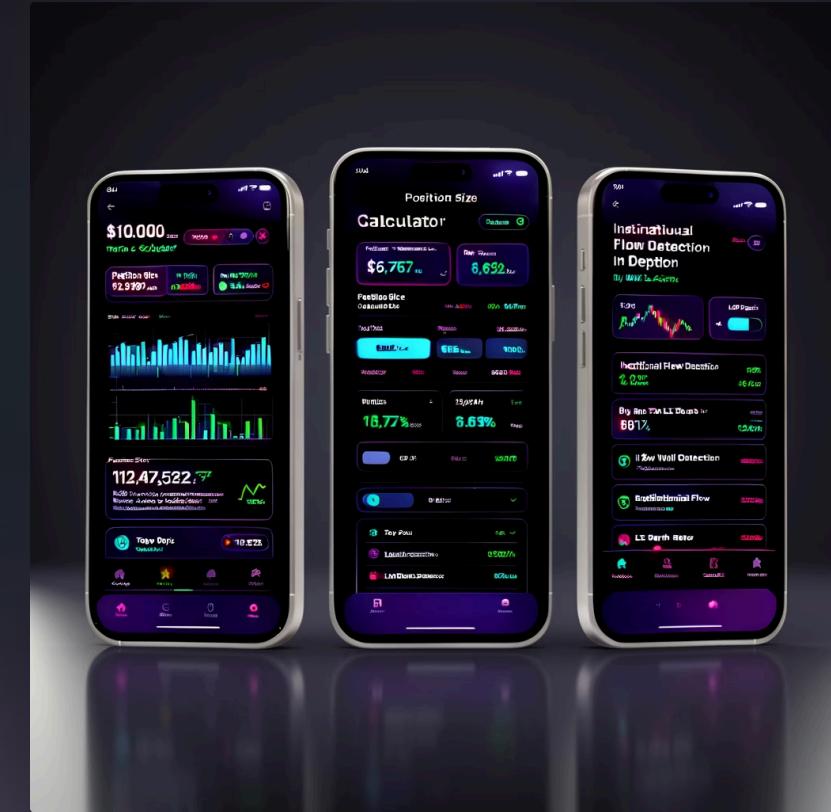


# SIMONS

by Code&Quant

Democratizing Institutional Order Flow & Statistical Arbitrage



💡 CRITICAL GAP ( PROBLEM )

# The Retail Trap

## The Hard Truth

90% of retail traders fail—not from lack of effort, but from trading on emotion instead of data. They're blind to institutional movements, chasing price action while "whales" operate on mathematical certainty.

"Retail trades with their heart. Institutions trade with math."

90%

Retail Failure Rate

Emotion-driven decisions lead to consistent losses

0

Institutional Insight

Retail traders lack visibility into whale activity

❖+ SOLUTION

# Meet Simons



## Statistical Mean Reversion

Probability-based signals driven by mathematical Z-Score analysis, eliminating emotional bias from every trade decision.



## Real-Time Order Flow

Live tracking of institutional movements, whale walls, and order book depth to identify where *smart* money flows.



## Math Over Mood

A Python-based ecosystem that transforms retail traders into quantitative analysts with institutional-grade tools.

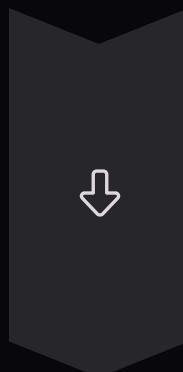
# SIMONS: The interface



# The Core Algorithm

## Statistical Mean Reversion Engine

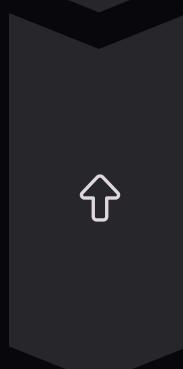
At the heart of Simons lies a mathematically rigorous approach: **Z-Score analysis** measures how far price deviates from its moving average. This removes guesswork and trades on pure probability.



**Z-Score < -2.0**

**Oversold → Buy Signal**

Price significantly below mean indicates reversion opportunity



**Z-Score > 2.0**

**Overbought → Sell Signal**

Price significantly above mean suggests imminent correction

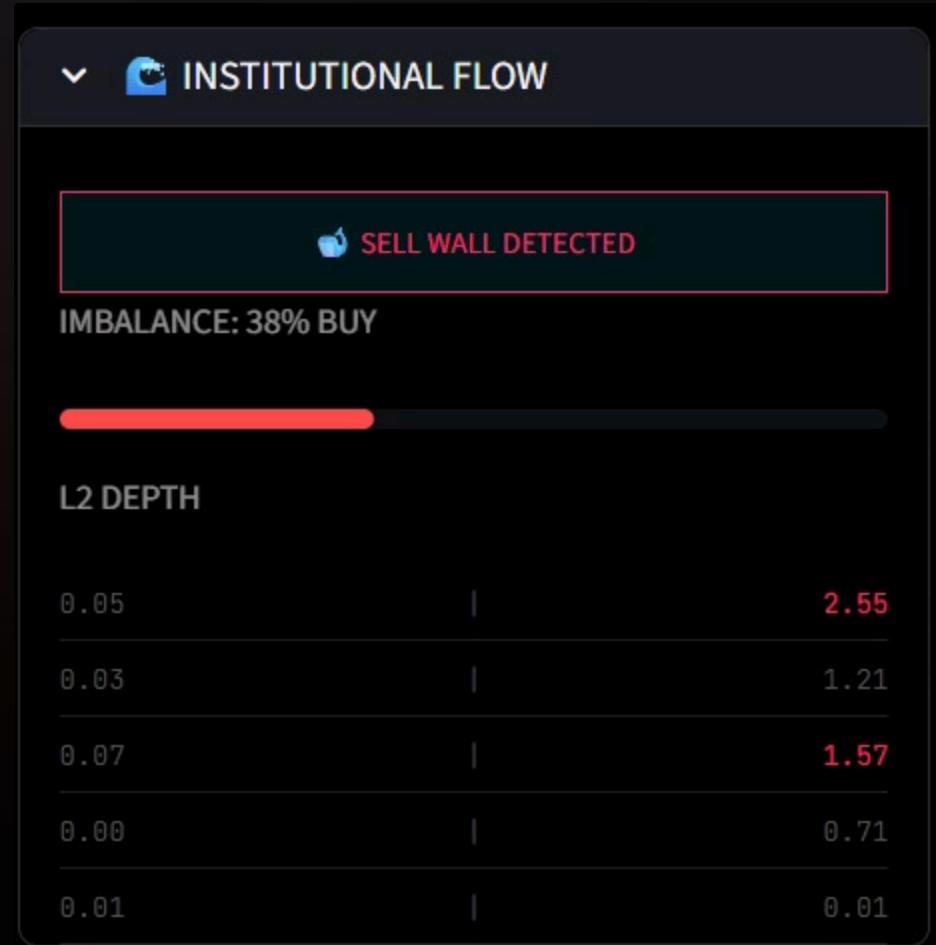


(The above is a representation of how Z-score looks in the interface)

- The Power of Probability:** By standardizing price deviation, we transform subjective "feelings" about market direction into objective, actionable statistical insights.

# Institutional Order Flow Intelligence

Most trading bots are blind—they only see price. **Simons sees volume, depth, and institutional positioning.** This is what separates retail noise from whale-grade signals.



## Whale Wall Detection

Real-time identification of massive buy/sell walls in the order book—the footprints of institutional capital preparing to move markets.



## Imbalance Meter

Live L2 data analysis calculating the precise ratio of buyers vs. sellers, revealing true supply-demand dynamics before price moves.



## The Confluence

Trades execute only when statistical signals align with whale activity—double confirmation eliminates false positives.



# Technical Architecture

Built for Speed, Precision & Scalability



## Frontend

**Streamlit** with custom CSS/JS injection creates a cyberpunk-inspired interface. Dark mode UI with neon accents matches the institutional-grade feel.



## Data Engine

**CCXT** provides unified API access to Kraken Exchange, handling real-time market data and order book depth with millisecond latency.



## Analytics

**Pandas & NumPy** power vectorized calculations for Z-Score computation, rolling statistics, and performance metrics at institutional speed.

## Visualization

**Plotly Graph Objects** render interactive candlestick charts with volume profiles, allowing deep visual analysis of price action and flow.

# The Strategy Lab

## Not Just a Bot—A Full Research Environment

Simons isn't just about live trading—it's a complete research platform. Test your theories, validate your strategies, and build confidence before risking capital.

01

### Deep Backtesting

Run simulations across **1000+** historical candles with tick-level precision

02

### Performance Analytics

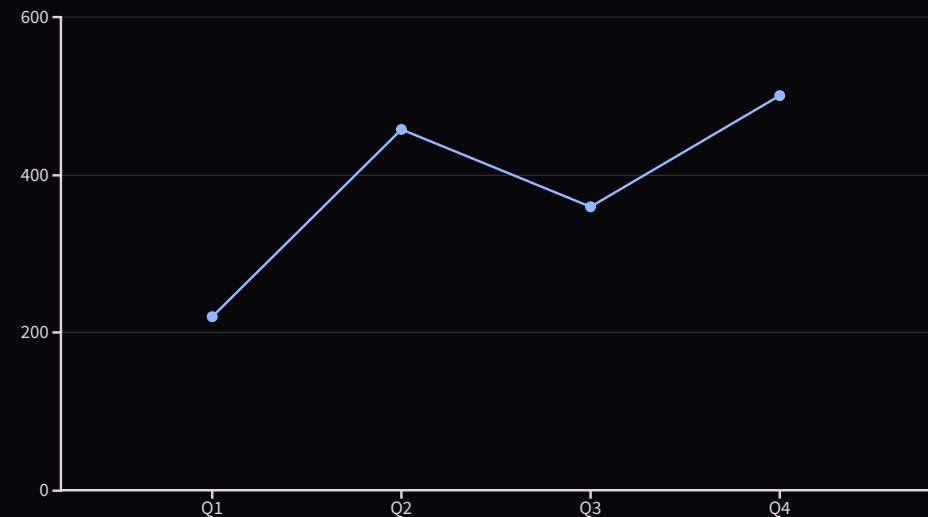
Generate equity curves, Sharpe ratios, and max drawdown metrics

03

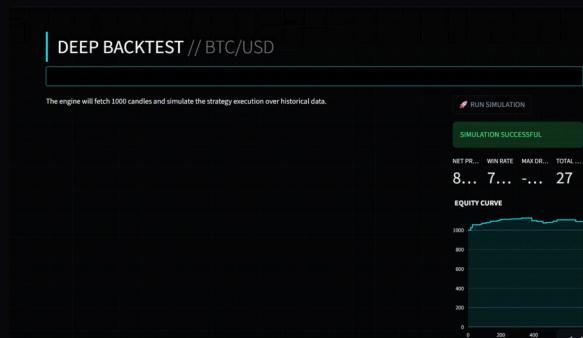
### Audit Reports

Export comprehensive HTML reports with every trade, entry, exit, and P&L

- Institutional Standard:** The same backtesting rigor used by quantitative hedge funds, now accessible to individual traders through an intuitive interface.



# Strategy lab :



TRADE AUDIT LOG

PRINT / SAVE REPORT

	Date	Type	Entry	Exit	PNL
0	18 Dec 2025, 1:00 pm	SHORT	\$8815.10	\$86440.80	2.67%
1	18 Dec 2025, 7:00 pm	LONG	\$84465.00	\$86803.80	2.77%
2	20 Dec 2025, 11:00 pm	SHORT	\$88338.10	\$88003.40	0.38%
3	21 Dec 2025, 2:00 am	LONG	\$87921.10	\$88117.90	0.22%
4	21 Dec 2025, 8:00 am	SHORT	\$88505.50	\$87653.70	0.9%
5	22 Dec 2025, 9:00 am	SHORT	\$89785.50	\$89273.80	0.57%
6	23 Dec 2025, 2:00 pm	LONG	\$86834.20	\$87962.70	1.3%
7	24 Dec 2025, 10:00 pm	SHORT	\$87940.10	\$87528.20	0.47%
8	25 Dec 2025, 3:00 pm	SHORT	\$88265.80	\$87833.10	0.49%
9	26 Dec 2025, 2:00 am	SHORT	\$89099.90	\$88374.90	0.81%

## BACKTEST PERFORMANCE REPORT ON BTC/USD:

### SIMONS // REPORT

SYMBOL: BTC/USD | TF: 1h  
NET PROFIT: 8.77% | WIN RATE: 70.4%

DATE	TYPE	ENTRY	EXIT	PNL
2025-12-18 13:00:00	SHORT	88815.10	86440.80	2.67%
2025-12-18 19:00:00	LONG	84465.00	86803.80	2.77%
2025-12-20 23:00:00	SHORT	88338.10	88003.40	0.38%
2025-12-21 02:00:00	LONG	87921.10	88117.90	0.22%
2025-12-21 08:00:00	SHORT	88505.50	87653.70	0.9%
2025-12-22 09:00:00	SHORT	89785.50	89273.80	0.57%
2025-12-23 14:00:00	LONG	86834.20	87962.70	1.3%
2025-12-24 22:00:00	SHORT	87940.10	87528.20	0.47%
2025-12-25 15:00:00	SHORT	88265.80	87833.10	0.49%
2025-12-26 02:00:00	SHORT	89099.90	88374.90	0.81%
2025-12-27 21:00:00	SHORT	87601.50	87578.90	0.03%
2025-12-28 18:00:00	LONG	87532.30	87826.40	0.34%
2025-12-29 00:00:00	SHORT	88225.90	87998.90	0.26%
2025-12-30 08:00:00	SHORT	87763.20	87820.20	-0.06%

# BACKTEST PERFORMANCE REPORTS

ETH/USD

Trading Pair Performance

13.75%

Net Profit

82.8%

Win Rate

## SIMONS // REPORT

SYMBOL: ETH/USD | TF: 1h

NET PROFIT: 13.75% | WIN RATE: 82.8%

DATE	TYPE	ENTRY	EXIT	PNL
2025-12-18 12:00:00	SHORT	2869.96	2844.33	0.89%
2025-12-21 01:00:00	LONG	2966.86	2974.12	0.24%
2025-12-21 08:00:00	SHORT	2991.16	2950.46	1.36%
2025-12-22 00:00:00	SHORT	3022.77	3031.35	-0.28%
2025-12-22 19:00:00	LONG	2980.45	3025.84	1.52%
2025-12-23 14:00:00	LONG	2915.35	2967.46	1.79%
2025-12-24 22:00:00	SHORT	2957.74	2937.40	0.69%
2025-12-25 10:00:00	LONG	2918.78	2958.04	1.35%
2025-12-25 23:00:00	LONG	2902.89	2970.41	2.33%
2025-12-27 16:00:00	LONG	2918.29	2926.40	0.28%
2025-12-27 23:00:00	SHORT	2947.10	2932.90	0.48%
2025-12-28 18:00:00	LONG	2929.53	2948.09	0.63%
2025-12-29 00:00:00	SHORT	2964.09	2972.39	-0.28%
2025-12-30 08:00:00	SHORT	2973.73	2969.02	0.16%

# SOL/USD(SOLANA) PERFORMANCE:

SOL/USD

Trading Pair Performance

22.67%

Net Profit

85.7%

Win Rate

## SIMONS // REPORT

SYMBOL: SOL/USD | TF: 1h

NET PROFIT: 22.67% | WIN RATE: 85.7%

DATE	TYPE	ENTRY	EXIT	PNL
2025-12-18 13:00:00	SHORT	126.39	122.91	2.75%
2025-12-18 19:00:00	LONG	117.54	121.43	3.31%
2025-12-21 01:00:00	LONG	125.07	125.54	0.38%
2025-12-21 13:00:00	LONG	123.64	125.42	1.44%
2025-12-22 11:00:00	SHORT	126.97	126.44	0.42%
2025-12-22 19:00:00	LONG	124.61	126.65	1.64%
2025-12-23 14:00:00	LONG	122.59	124.57	1.62%
2025-12-24 02:00:00	LONG	122.25	122.39	0.11%
2025-12-25 10:00:00	LONG	121.50	123.52	1.66%
2025-12-25 18:00:00	SHORT	123.93	121.75	1.76%
2025-12-25 23:00:00	LONG	119.97	123.26	2.74%
2025-12-27 21:00:00	SHORT	124.41	123.69	0.58%
2025-12-28 18:00:00	LONG	123.07	124.14	0.87%
2025-12-28 23:00:00	SHORT	125.14	125.89	-0.6%

# BTC/USD(BITCOIN) PERFORMANCE:

BTC/USD

Trading Pair Performance

8.62%

Net Profit

67.9%

Win Rate

## SIMONS // REPORT

SYMBOL: BTC/USD | TF: 1h

NET PROFIT: 8.62% | WIN RATE: 67.9%

DATE	TYPE	ENTRY	EXIT	PNL
2025-12-18 13:00:00	SHORT	88815.10	86440.80	2.67%
2025-12-18 19:00:00	LONG	84465.00	86803.80	2.77%
2025-12-20 23:00:00	SHORT	88338.10	88003.40	0.38%
2025-12-21 02:00:00	LONG	87921.10	88117.90	0.22%
2025-12-21 08:00:00	SHORT	88505.50	87653.70	0.96%
2025-12-22 09:00:00	SHORT	89785.50	89273.80	0.57%
2025-12-23 14:00:00	LONG	86834.20	87962.70	1.3%
2025-12-24 22:00:00	SHORT	87940.10	87528.20	0.47%
2025-12-25 15:00:00	SHORT	88265.80	87833.10	0.49%
2025-12-26 02:00:00	SHORT	89099.90	88374.90	0.81%
2025-12-27 21:00:00	SHORT	87601.50	87578.90	0.03%
2025-12-28 18:00:00	LONG	87532.30	87826.40	0.34%
2025-12-29 00:00:00	SHORT	88225.90	87998.90	0.26%

 POSITION SIZE CALCULATOR ➡

⚠ Turn OFF 'Live Mode' to type comfortably.

Account Balance (\$)	Risk (%)	Entry Price (\$)	Stop Loss (\$)
1000.00	1.00	95860.60	94901.99
RISK AMOUNT		POSITION SIZE	
\$10.00		0.0104	
		TOTAL VALUE	
		\$1000.00	

# Risk Management & Alerts

Safety Built Into Every Trade

## Position Sizing

Integrated calculator automatically determines optimal position size based on your account balance and risk tolerance percentage—never over-leverage.

## Stop Loss Logic

Dynamic stop-loss placement adapts to volatility conditions, protecting capital while giving trades room to breathe and develop.

## Remote Monitoring

Telegram bot integration delivers real-time signals, whale alerts, and trade notifications directly to your phone—stay connected anywhere.

## ⚠ THE PROBLEM

# THE HFT TRAP

"SEBI Bans HFT Giant Over ₹4,800 Cr Manipulation!"

High-Frequency Trading firms exploit market inefficiencies. One notorious tactic involves "Pump & Dump" schemes, particularly on index expiry days. Retail traders, relying on lagging indicators, are lured into artificial breakouts, buying at the peak due to FOMO.

## The Process: Retail Liquidation

- **Fake Out:** Algorithms manipulate cash markets, creating false bullish signals.
- **The Trap:** Retail traders (RSI/MACD users) buy into the perceived rally.
- **The Slaughter:** HFTs dump positions, leading to massive retail liquidations.

**Key Insight:** Retail traders are fighting blind against sophisticated, predatory algorithms, leading to consistent losses.

## 💡 THE SOLUTION

# THE SIMONS ADVANTAGE

Seeing the Invisible with Quantum Analytics

Simons provides an unparalleled defense against institutional manipulation. Our quantum analytics detect artificial patterns in real-time, giving retail traders the edge previously reserved for "whales."

## The Tech: Unmasking Manipulation

- **Z-Score (Math):** Flags abnormal price movements as statistical anomalies (e.g.,  $Z > +4.0$ ), issuing alerts like "EXTREME OVERBOUGHT."
- **Whale Wall Detector:** X-rays the order book to reveal hidden buy/sell walls, warning of "TRAP AHEAD."

**Key Insight:** Simons users trade WITH the insights of institutions, not against their hidden tactics.

# Future Roadmap

From Hackathon Project to Production Platform

## Q1: Level 3 Market Data

Accessing the most accurate and precise in-depth data requires charges to be paid to the exchanges. By integrating it with the current system, hedge fund level precision is achievable.

"BETTER THE DATA, BETTER THE RESULTS "

## Q3: Multi-Exchange

Expand beyond Kraken to Binance, Bybit, and Coinbase—unified dashboard for cross-exchange arbitrage opportunities.

## Q5: Community

Launch strategy marketplace where users share, test, and monetize their own mean reversion algorithms.

1

2

3

4

5

## Q2: Machine Learning

Integrate LSTM neural networks to predict Z-Score deviations and enhance signal accuracy with adaptive learning.

## Q4: Full Automation

Secure API key integration for fully automated execution—sleep while your strategy trades 24/7 with institutional discipline.

# Math Over Mood

Simons bridges the gap between gambling retail traders and quantitative analysts

We've built more than a trading bot—we've created a complete ecosystem that democratizes institutional-grade order flow analysis and statistical arbitrage. Every feature, from whale detection to backtesting, serves one mission: **giving retail traders the tools to trade like institutions.**

Ready to Trade with Math?

[View Live Demo](#)



# THE BUILDERS BEHIND SIMONS



## Kritika Sharma & Kanishka Khati

### Frontend Architects

Built the reactive UI engine, crafting a seamless and intuitive user experience within the Simons platform with a cyberpunk aesthetic.



## Sankalp Sharma

### Finance Strategist

Designed the core Statistical Arbitrage (Z-Score) models and Risk protocols, translating complex institutional theory into objective, executable signals.



## Riya Sharma & Ashwini Mittal

### Backend

Designed the Fault-Tolerant Data Pipeline & Vectorized Calculation Engine.