

TOAI User Manual

1. Download the TradeOptimaAI software from the Login page
2. Load your strategy on to NinjaTrader chart
3. Select Your strategy, set your parameters
4. Log in to TOAI on NinjaTrader
 - a. Username and Password was sent to you via email when you signed up for a subscription.

Properties

▼ 00. TOAI Parameters

TOAIMode	Scalp ▼
01. Write TradeOptimaAI File	<input checked="" type="checkbox"/>
02. Use TradeOptimaAI	<input type="checkbox"/>
04. TradeOptimaAI Weights File	scalp 1217.csv ▼
05. Probability of Win Min (>) %	0
TOAI License Password	your passsword
TOAI License Email	your email

5. TOAI Mode
 - a. DayOrScalp or Swing in Drop Down menu

▼ 00. TOAI Parameters

TOAIMode	Scalp ▼
01. Write TradeOptimaAI File	<input checked="" type="checkbox"/>
02. Use TradeOptimaAI	<input type="checkbox"/>
04. TradeOptimaAI Weights File	scalp 1217.csv ▼
05. Probability of Win Min (>) %	0
06. Probability of Win Limit (<=) %	100

- b. Check Write TradeOptimaAI box

▼ 00. TOAI Parameters

TOAIMode	Scalp ▼
01. Write TradeOptimaAI File	<input checked="" type="checkbox"/>
02. Use TradeOptimaAI	<input type="checkbox"/>
04. TradeOptimaAI Weights File	scalp 1217.csv ▼
05. Probability of Win Min (>) %	0
06. Probability of Win Limit (<=) %	100

c. Enable and Apply Back Test

i. **Best Practice Considerations- Back Testing:**

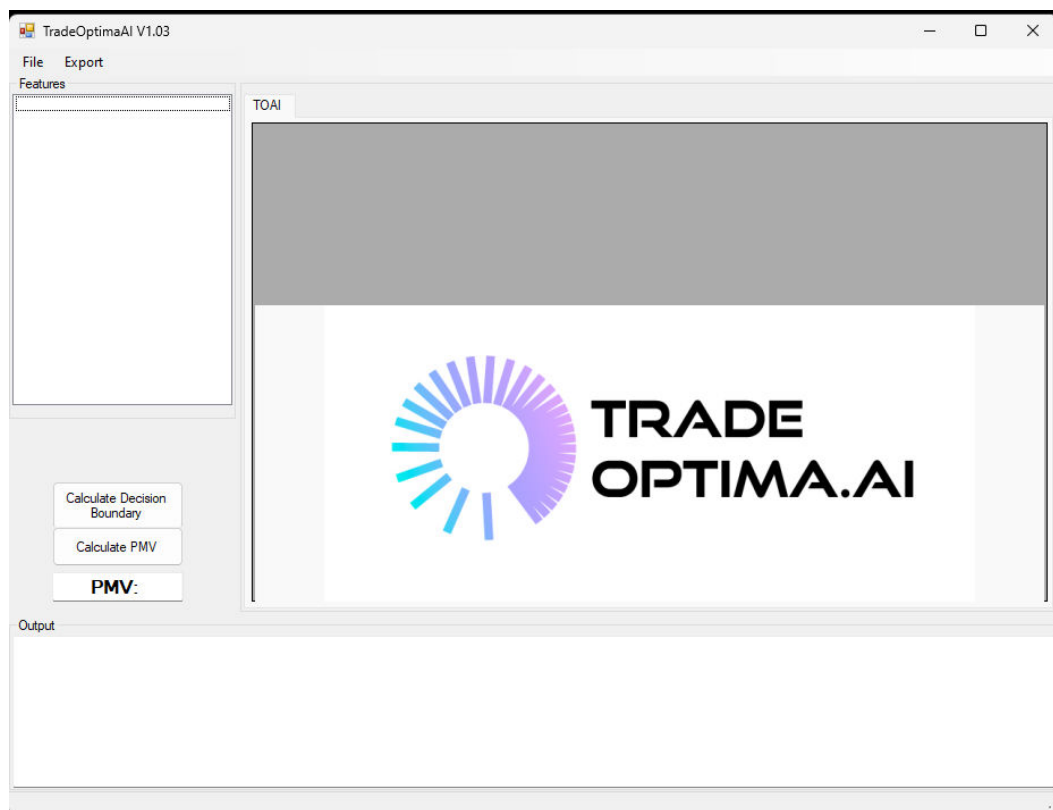
- i. **Sample Size:** *Ensure focus is on number of trades instead of number of days to analyze and optimize strategy performance beyond random chance.*
- ii. **Market Regime Changes:** *Test strategies across different market conditions: bullish, bearish, sideways/consolidating, periods of high/low volatility, seasonality and news events. Significant regime changes may affect model performance.*
- iii. **Avoid Curve Fitting:** *Curve fitting occurs when a trading model is overly optimized to historical data capturing noise instead of capturing underlying patterns to categorize probability of wins and losses in the software. The strategy will perform well in back tests but fail in live markets with curve fitting.*
- iv. **Transaction Costs:** *Include realistic slippage, commissions, and bid-ask spreads in back tests, as futures markets can have significant transaction costs that impact strategy profitability.*

ii. **Best Practice Considerations - Forward Testing:**

- i. **General:** *Forward testing is a critical step in validating your strategy with the TradeOptimaAI file after back testing. Forward testing means running your automated trading strategy embedded with TradeOptimaAI file on live market data in real-time, but with simulated trades rather than actual money.*
- ii. **Market Conditions:** *Forward test through different market regimes as trending, ranging, news events and volatile periods all behave differently.*
- iii. **Execution Reality:** *Pay attention to order fills, especially for strategies requiring quick execution. Futures markets can have significant slippage during volatile periods.*
- iv. **Sample Size:** *Ensure you have enough trades during the forward testing period to draw meaningful statistical conclusions about your strategy's performance in different market conditions.*

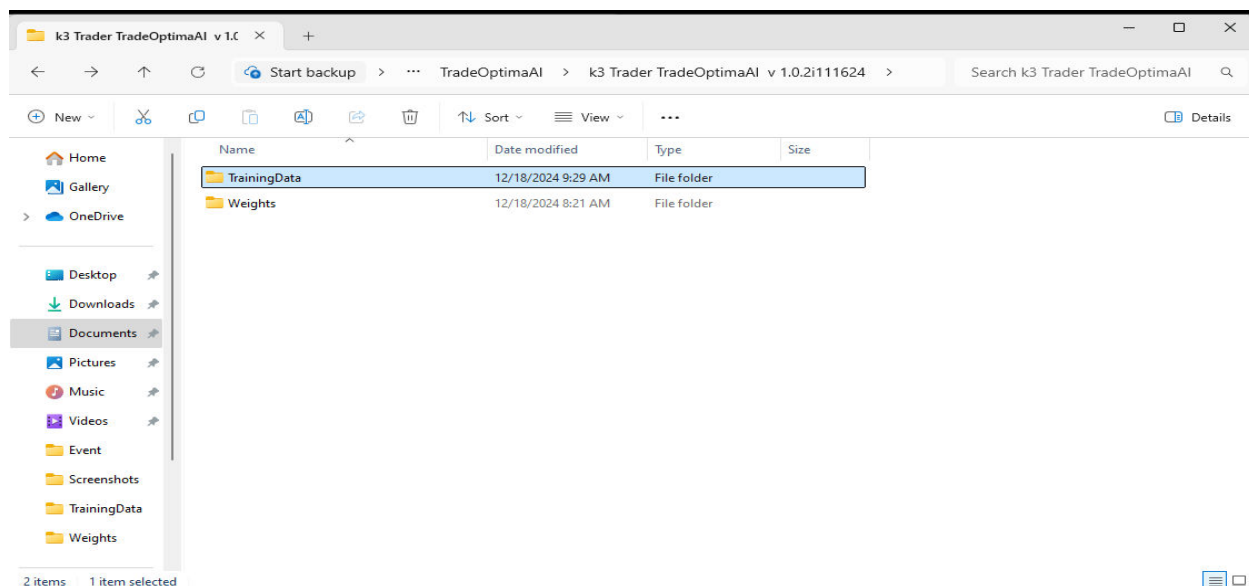
6. TradeOptima AI Program

a. Open TradeOptimaAI Software Program

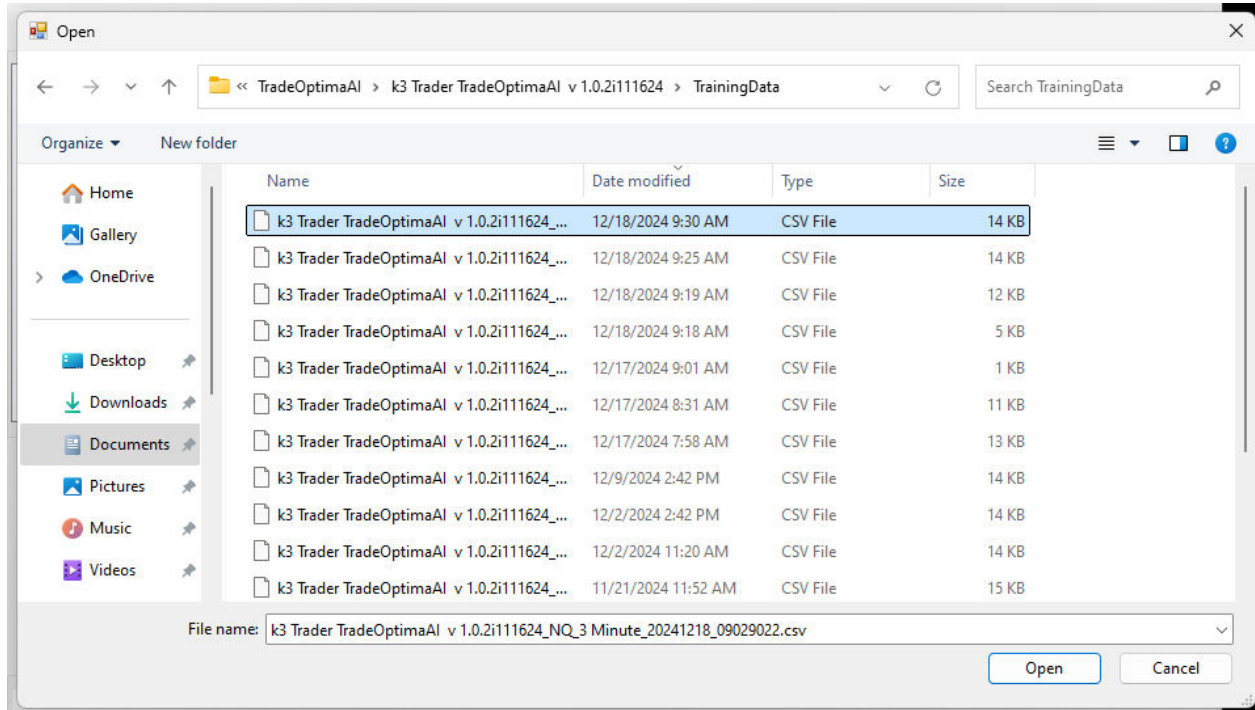


b. Load Training File

- i. File > Open > Training File > Documents > Double Click on Trade OptimaAI > Double Click on *Your Strategy Name* > Training Data >

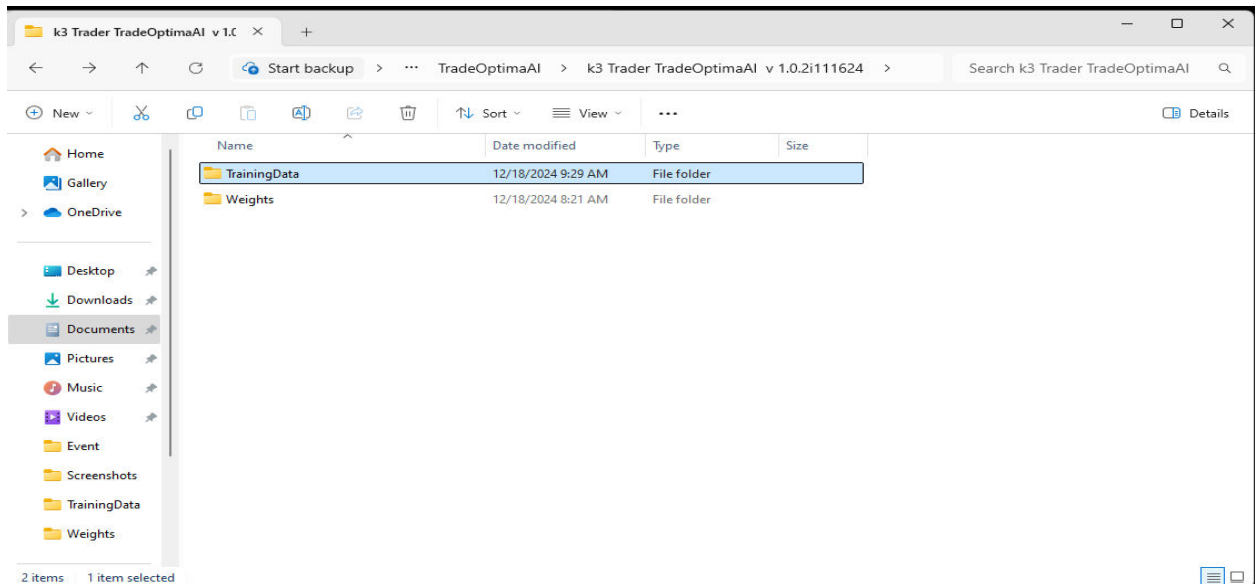


- ii. Select the desired Training Data Test > Open

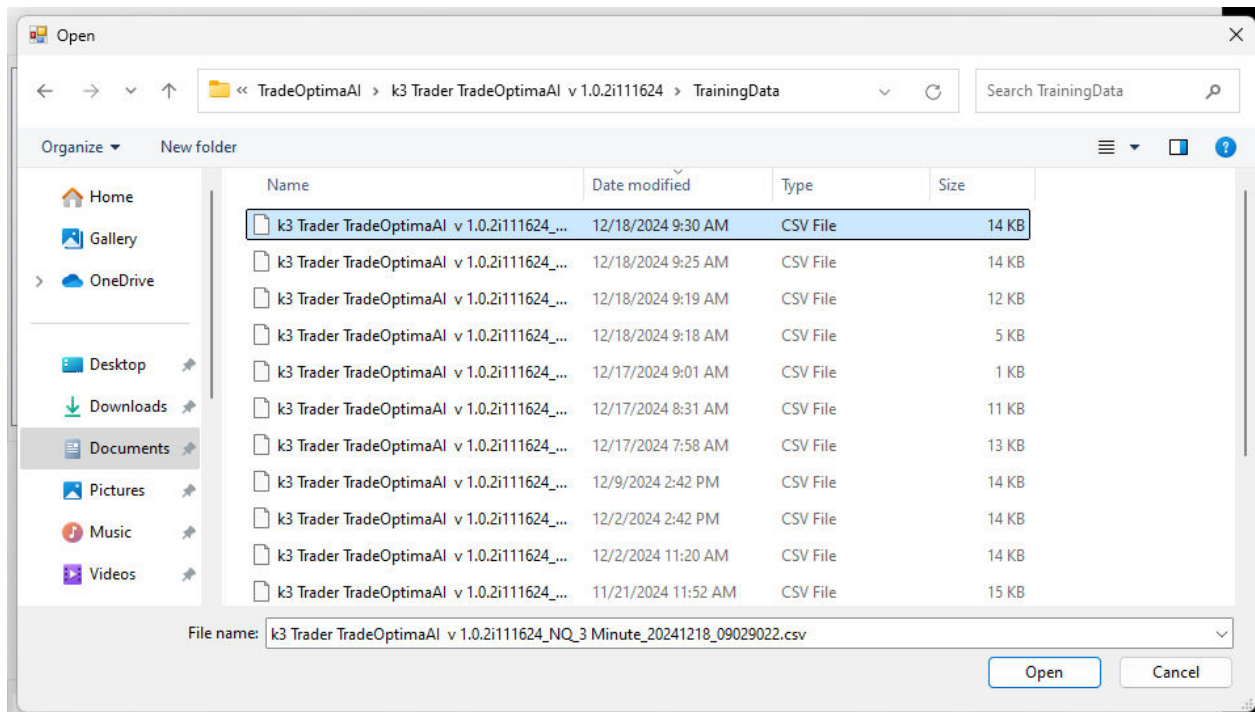


- c. Load Test File

- i. File > Open > Test File > Documents > TradeOptimaAll > Double Click on the *Your Strategy Name* > Training Data >



- ii. Select the desired Training Data Test > Open



- d. Calculate Decision Boundary and Predictive Model Value (“PMV”)

- i. Select Features that you want to the TradeOptima AI to apply to your Strategy and click “Calculate Decision Boundary.”

- ii. **Features Description**

● **Momentum 1A (Fast)**- Trend following indicators used in technical analysis to help traders identify changes in the strength, direction, and duration of trend in a financial instrument.

● **Momentum 2A (Slow)**- Trend following indicators used in technical analysis to help traders identify changes in the strength, direction, and duration of trend in a financial instrument.

● **Momentum 3A**- Identify overbought and oversold conditions and momentum shifts in the market

● **Momentum 4A**- versatile technical analysis indicator that measures the deviation of the price from its average price.

- **Support and Resistance 1B1 and 1B2** - Key concept in technical analysis that are used by traders to quantify support and resistance from current price to swing high/low.
- **Support and Resistance 1B3** - Key concept in technical analysis that are used by traders to quantify support and resistance from average price from swing high/low.
- **Trend (1C)** - Identify the direction and strength of a market trend. These indicators help traders determine whether a market is in an uptrend, downtrend, or moving sideways, and they can be used to make decisions about entering or exiting trades.
- **Trend (2C)**- Stacked moving averages of multiple moving averages plotted together from shorter to longer time periods to identify uptrends, downtrends or no trends.
- **Trend (3C)** - Indicator is used to identify support and resistance levels, trend direction, momentum, and potential reversal points.
- **Volatility 1D**- Indicator uses the average true range to identify the volatility range.
- **Volatility 2D**- Indicator uses the standard deviation of price to identify the volatility range.
- **Volume 1E** - Indicator identifies high/low volume of financial instrument traded

iii. Best Practice Considerations - Feature Selection:

- **General:** *Traders should consider selecting a feature to evaluate one at a time by using our predictive model value (PMV) score. Traders then add each new feature to a set of previously tested features, each time evaluating a new PMV score.*
- **Avoid Curve Fitting:** *Selecting less features is generally better than more to embed in your strategy. Too many features often contain irrelevant or redundant features that can degrade model performance. By removing these unnecessary features, you can reduce overfitting, decrease training time and create more interpretable results that are easier to understand.*

- **Market Conditions:** Different features may work better in different market regimes: trending vs. ranging markets, high/low volatility markets, seasonal markets and market news events.

iv. Click on “Calculate PMV”

- PMV represents the probability that a predictive winning percentage trade would rank higher than a predictive losing trade into an easy-to-understand single number score.

- Example: a PMV of .65 means the machine learning model has a 65% chance of correctly distinguishing between winning and losing trades.

TradeOptimaAI V1.03

File Export

Features

- ☐ T/F
- ☐ DateTimeOfEntry
- ☐ PnL
- ☐ ProbOfTrue
- ☐ TradeDirection
- ☐ Momentum-1A
- ☐ Momentum-2A
- ☐ Momentum-3A
- ☒ Momentum-4A
- ☐ Trend-1C
- ☒ Trend-2C
- ☐ Trend-3C
- ☒ Support Resistance-1B1
- ☐ Support Resistance-1B2
- ☐ Support Resistance-1B3
- ☒ Volatility-1D
- ☒ Volatility-2D
- ☒ Volume-1E

Calculate Decision Boundary

Calculate PMV

PMV: 0.69

TOAI

	Momentum-4A	Trend-2C	Support Resistance-1B1	Volatility-1D	Volatility-2D	Volume-1E
►	-0.45712688395...	-0.83502880140...	0.121115236905...	0.197696389080...	-0.20002119978...	-0.00081826735...
	-2.18757643687...	-1.19756348322...	8.256599463015...	5.058261330176...	-4.99947006146...	-1222.09446351...
*						

TRADE OPTIMA.AI

Output

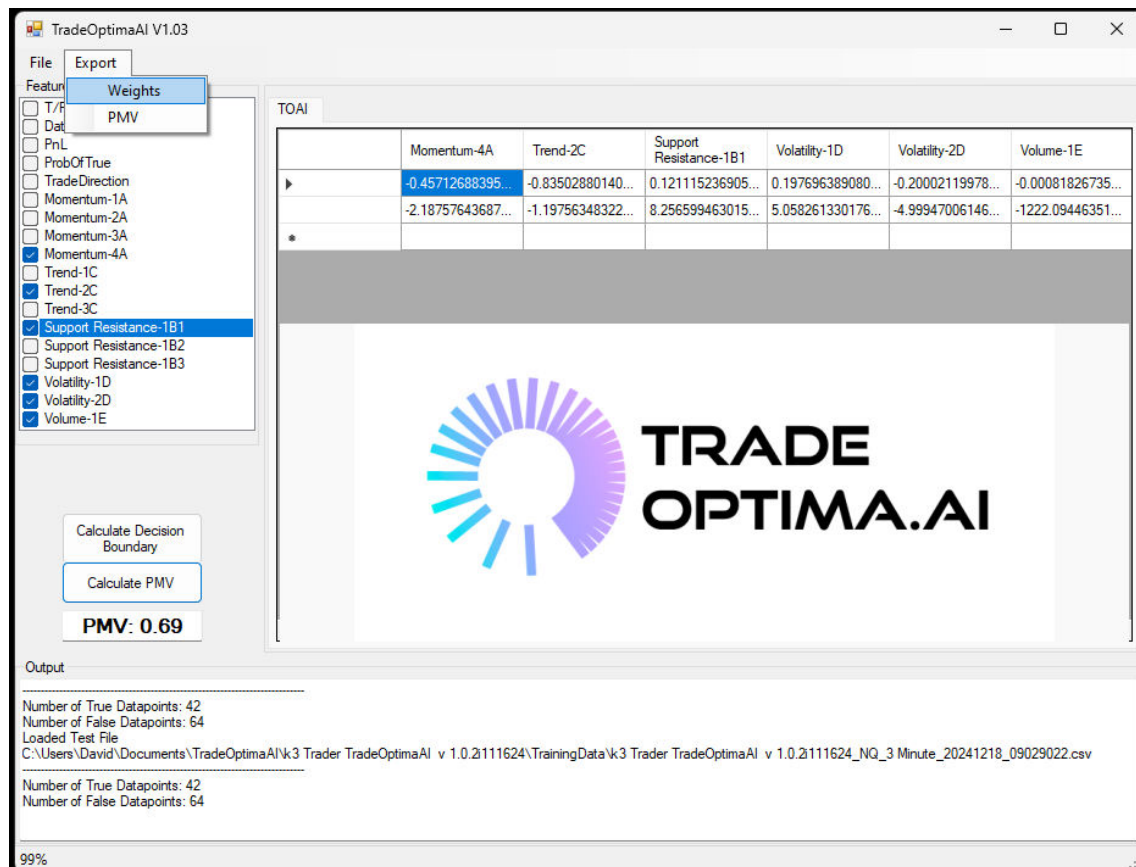
Number of True Datapoints: 42
 Number of False Datapoints: 64
 Loaded Test File
 C:\Users\David\Documents\TradeOptimaAI\k3 Trader TradeOptimaAI v 1.0.2111624\TrainingData\k3 Trader TradeOptimaAI v 1.0.2111624_NQ_3 Minute_20241218_09029022.csv

Number of True Datapoints: 42
 Number of False Datapoints: 64

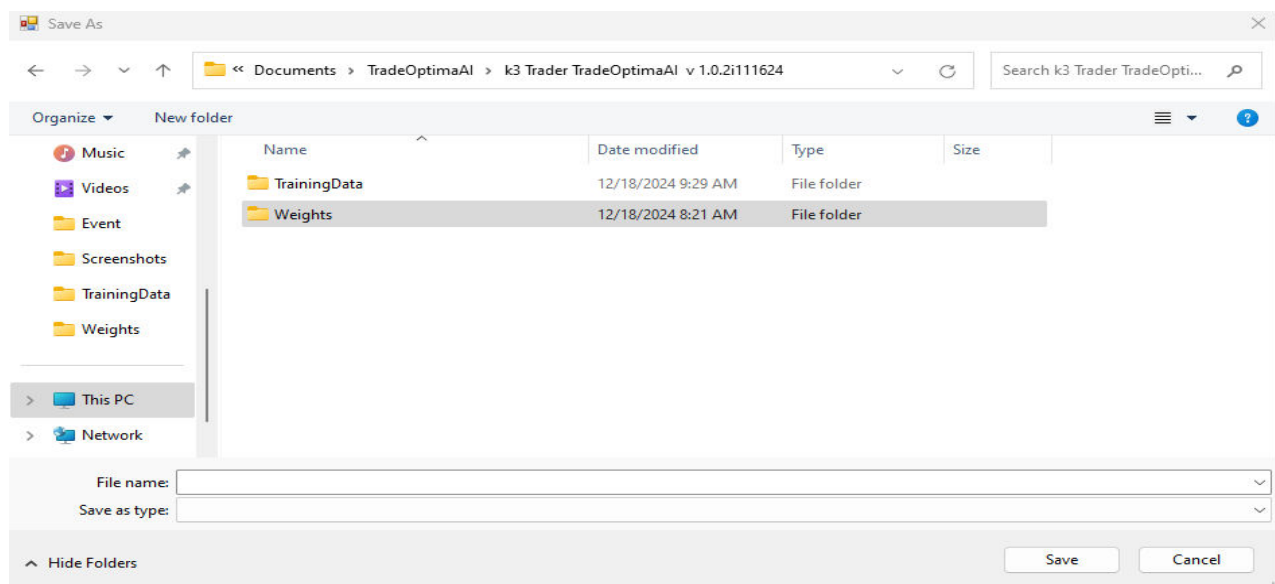
99%

e. Export Weighted File

i. Export > Weights >

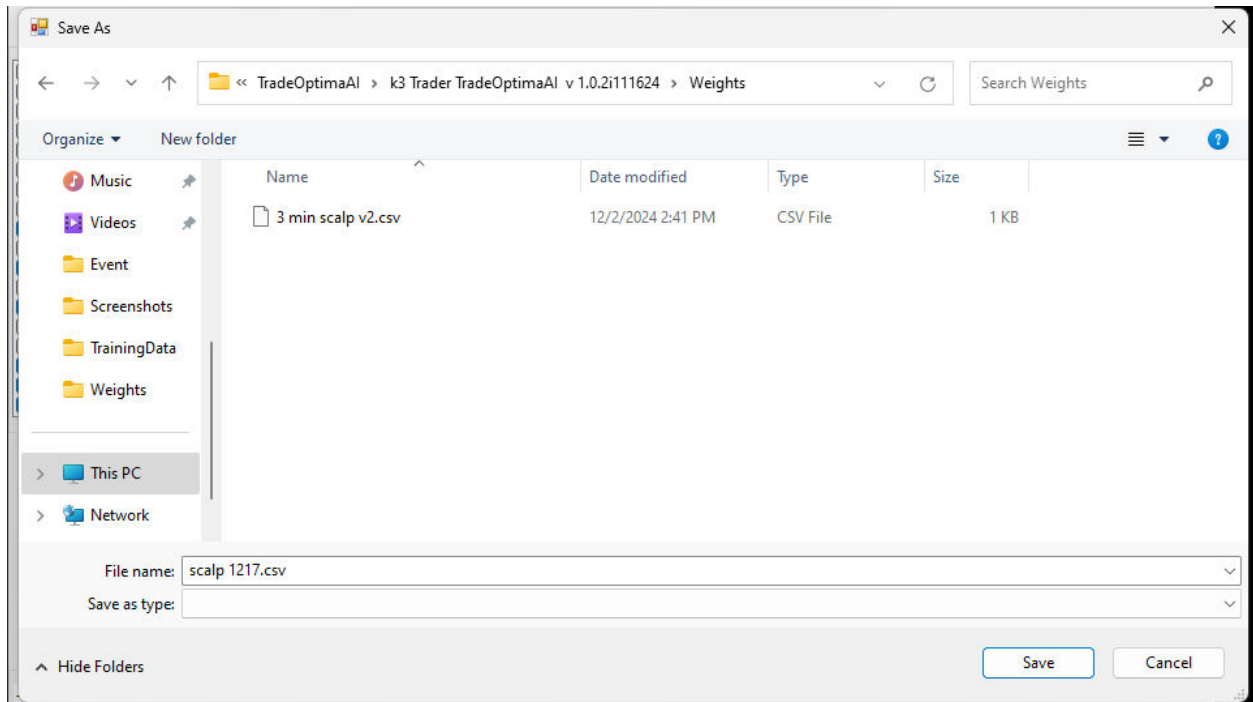


ii. Documents > TradeOptimaAI > Double Click on *Your Strategy Name* > Weights



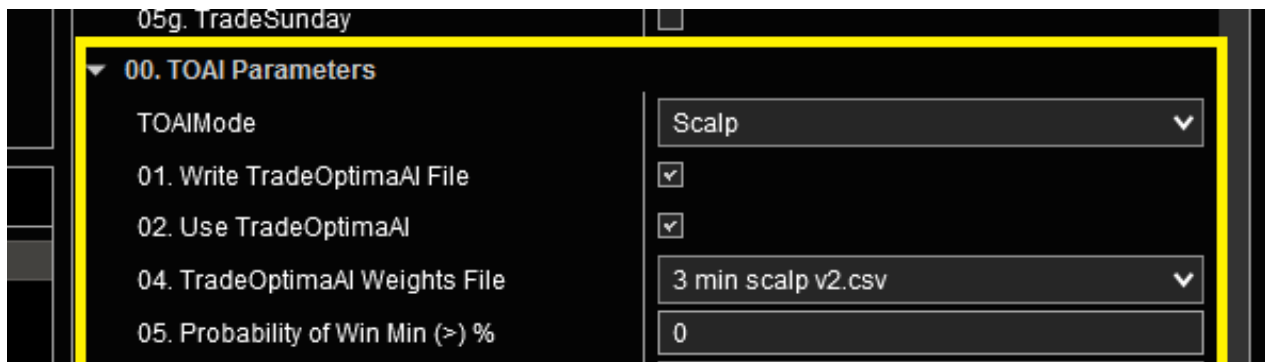
iii. Name your Weighted File

●Note: Weighted files must end in .csv



7. Run Back Test with Weighted File

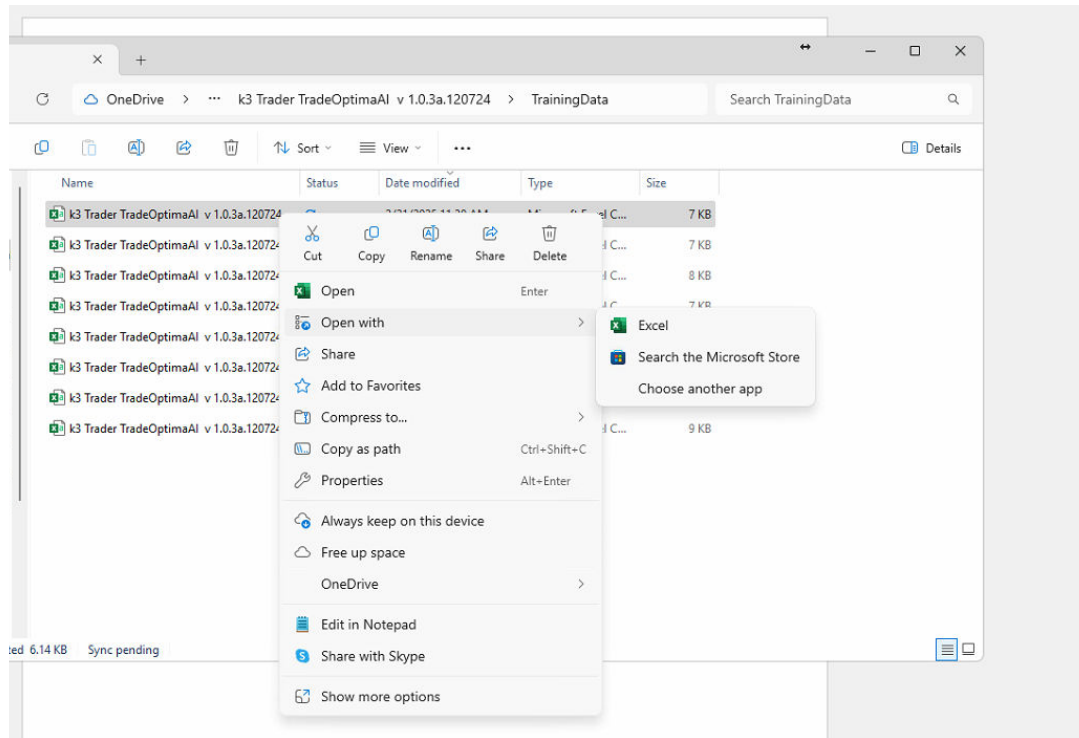
- Right Click > Strategies > Scroll down to TOAI Parameters > Check “Write TradeOptimaAI File > Check “Use TradeOptimaAI”
- Choose TradeOptimaAI Weighted File in Dropdown menu
- Input “0” in Probability of Win Min (>) %



- Enable Strategy
- Click Apply

8. Analyze Back Test with Weighted File Applied

- a. Documents Folder > TradeOptimaAI > Double Click on *Your Strategy Name* > Training Data > Select the Training Data Test > Right Click > Open With a Spreadsheet software



- b. Select “ProbOfTrue” in Column D > Data > Sort by Lowest to Highest (If you get a prompt to “Expand the selection”, make sure it is selected to sort)
 - i. The TOAI model will output a Probability of True score between 0 and 100.
 1. The Probability of True used by TOAI refers to the predicted probability that a given trade will be a winning or losing trade.

AutoSave On

File Home Insert Page Layout Formulas Data Review View Help

Get Data From Data Sources From Web From Text From Tables Recent Connections Existing Connections Refresh All Queries & Connections Data Model What-if Forecast Group Ungroup Subtotal

Sort Filter Advanced Sort & Filter Columns Filter Rows Remove Duplicates Validation Data Tools Consolidate Data Model What-if Forecast Group Ungroup Subtotal

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c. Determine Your Probability of Win Minimum

- Sum Column C to calculate the PnL of the back test without any TOAI filtering applied to find your baseline. In the example above, the PnL in this particular strategy was \$6,222 with 114 trades.

- Note: In most spreadsheet programs, you can view the sum of selected cells at the bottom right of your spreadsheet.

Average: 55.0619469 Count: 114 Sum: 6222		
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- Identify the Probability of True Minimum that yields the most amount of predictive profit by summing the PnL in Column C of only the corresponding trades that score at or above the Probability of True in Column D. The **lowest** number in that range of Column D is your Probability of Win Minimum.

- Practice Tip*- Traders may consider to start at Probability of True of 50, calculate total corresponding PnL in Column C and compare it to the baseline results. Repeat this calculation with different Probability of True values to find the number that works best for the particular strategy. Generally, Traders will want to find the number that yields the most amount of predictive profit, less number of trades from baseline testing

and desired strategy performance results. TOAI will filter your trading strategy to only take trades that score in excess of the Probability of True Minimum.

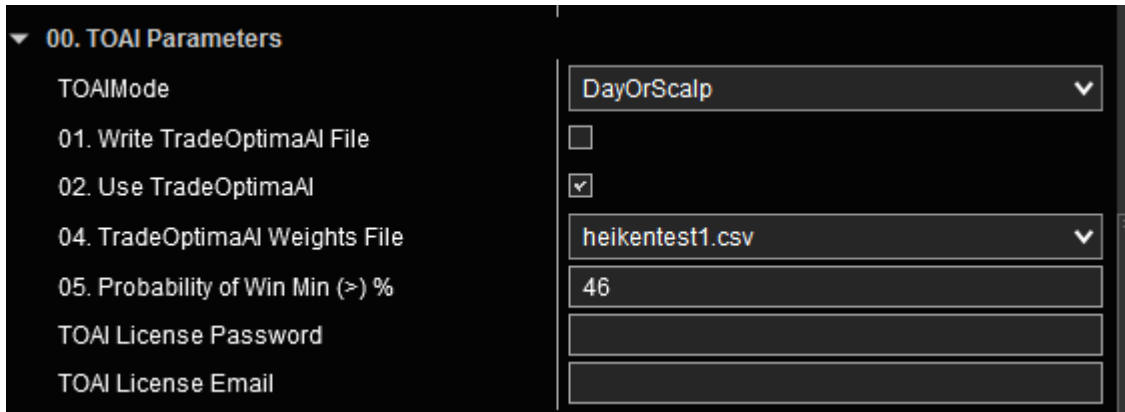
B	C	D	E	F	G	H
7/16/2025 10:35	395	40	-1	-1	-2	0.188691
7/24/2025 12:59	-124	40	-1	-1	-2	0
7/9/2025 12:37	-79	41	1	1	-2	1
7/31/2025 10:13	395	42	-1	-1	-2	0
7/9/2025 14:59	-114	44	1	1	-2	0.986383
7/28/2025 12:20	-134	44	-1	-1	-2	0
7/30/2025 14:32	-189	44	1	1	2	0.796363
7/2/2025 9:57	-404	45	-1	-1	-2	0.145833
7/8/2025 9:32	395	46	1	1	-2	1
7/9/2025 14:22	-99	47	1	1	-2	1
7/10/2025 14:49	395	48	-1	-1	-2	0
7/7/2025 9:54	395	49	-1	-1	-2	0
7/9/2025 14:53	-404	49	-1	-1	-2	0
7/2/2025 11:48	-74	50	-1	-1	-2	0
7/7/2025 8:50	395	50	1	1	2	0.710695
7/15/2025 11:57	395	50	-1	-1	-2	0
7/24/2025 11:02	125	50	-1	-1	2	0
7/30/2025 13:28	395	51	1	1	2	1
7/15/2025 9:01	-404	52	-1	-1	-2	0
7/16/2025 13:25	395	52	1	1	2	0.791677
7/23/2025 12:26	395	52	1	1	-2	1
7/18/2025 8:40	30	53	-1	-1	2	0
7/14/2025 14:34	165	54	-1	-1	-2	0.161716
7/22/2025 13:18	-404	54	-1	-1	-2	0
7/30/2025 10:01	395	55	-1	-1	2	0
7/2/2025 10:13	395	56	-1	-1	-2	0.027442
7/16/2025 14:41	-129	56	1	1	-2	1
7/10/2025 10:25	395	57	1	1	2	1
7/24/2025 11:29	-44	57	-1	-1	-2	0
7/7/2025 8:43	-404	58	1	1	2	0.748845
7/11/2025 10:09	395	59	-1	-1	-2	0
7/18/2025 10:12	-19	61	1	1	2	1
7/23/2025 9:01	-404	61	-1	-1	-2	0
7/7/2025 11:47	-84	62	-1	-1	-2	0.130091
7/8/2025 9:01	395	63	-1	-1	-2	0
7/1/2025 9:16	-404	64	1	1	-2	1
7/7/2025 14:53	395	64	1	1	-2	1

Average: 114.0972222 Count: 72 Sum: 8215		
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2. In the example above, by summing the PnL in Column C of only the corresponding trades that score at 46 or above, it was determined that a Probability of True score of 46 would have yielded the optimal predictive strategy performance results with a profit of \$8,215 and total trades of 72, or 42 less trades with TOAI filtering software applied to the original back test results. Therefore, “46” would have been selected as the value entered on the Probability of Win Minimum and only take trades that score at 46 or above.

9. Apply Weighted File to Strategy

- a. Right Click > Strategies > TOAI Parameters > Check Use TradeOptimaAI
- b. Choose Trade OptimaAI Weighted File in Dropdown menu
- c. Input the value identified from Step 8 in Probability of Win Min (>) %



▼ 00. TOAI Parameters	
TOAIMode	DayOrScalp ▼
01. Write TradeOptimaAI File	<input type="checkbox"/>
02. Use TradeOptimaAI	<input checked="" type="checkbox"/>
04. TradeOptimaAI Weights File	heikentest1.csv ▼
05. Probability of Win Min (>) %	46
TOAI License Password	
TOAI License Email	

- d. Enable Strategy
- e. Click Apply