

EI ALGOS INC.

Trader Profile Intelligence System

How Our ML System Classifies, Learns From, and Improves
7 Distinct Trader Behavioral Profiles

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1. Executive Summary

EI ALGOS employs a behavioral intelligence engine that classifies every trader into one of **7 behavioral archetypes** based on their actual trading patterns — not self-reported surveys. The system continuously monitors 6 behavioral dimensions across every trade: execution discipline, exit behavior, stop-loss adherence, position sizing, pre-trade mental state, and conviction level.

Once classified, the ML system applies **profile-aware adjustments** to every trade recommendation: stop-loss distances are widened or tightened, position sizes are scaled, TP targets are adjusted, and risk emphasis is calibrated to match the trader's psychological profile. The system then **learns from outcomes** — if a Disciplined trader maintains their edge across 20+ trades, their score ceiling rises. If a Gambler consistently ignores stops, the system progressively restricts their access to high-risk strategies.

In our verification testing, the ML-enhanced system demonstrated a +38% improvement in win rate and +\$29,665 P&L; improvement compared to the baseline across all 7 profiles and 3 trading horizons.

2. Profile Classification: How Traders Are Categorized

2.1 Data Collection

Every trade a user submits includes behavioral metadata captured at the point of execution. The system collects 6 behavioral dimensions per trade:

- **Pre-Trade State** — Was the trade structured/planned, reactive, emotional, or in recovery mode?
- **Execution Discipline** — Exactly as planned, minor deviation, major deviation, or no plan?
- **Exit Behavior** — Followed plan, adjusted on new data, emotion-driven, or no clear reason?
- **Stop-Loss Behavior** — Respected, adjusted logically, moved emotionally, or no stop loss?
- **Position Discipline** — Within rules, slightly oversized, significantly oversized, or not defined?
- **Conviction Score** — Self-rated 1-5 scale of how confident the trader was in the trade.

2.2 Scoring Algorithm

A minimum of **3 trades** with behavioral data is required for initial classification (5+ recommended). Each trade's behavioral signals are scored against all 7 archetype templates simultaneously. Signals contribute weighted points (ranging from +0.5 to +3.0) to each archetype's running total. Scores are then normalized to 0-100 scale by dividing by the maximum possible score.

The archetype with the highest normalized score becomes the **primary profile**. If a secondary archetype exceeds 10% score, it is recorded as a **secondary profile** (e.g., 'Analytical with Fear-Driven tendencies'). A **confidence metric** measures how dominant the primary profile is relative to all others — higher confidence means more targeted recommendations.

3. The 7 Archetypes: Behavioral Signals & Scoring

3.1 Disciplined / Process-Oriented

Follows a plan consistently, respects risk rules, and executes with low emotional interference.

Behavioral Signal	Score Weight
Execution exactly as planned	+2.0
Exit followed plan	+1.5
Stop loss respected	+2.0
Position within rules	+1.0
Pre-trade state: structured/planned	+1.5

Example Behavioral Fingerprint:

pre_trade_state: *structured_planned* | execution_discipline: *exactly_as_planned* | exit_behavior: *followed_plan* | stop_loss_behavior: *respected* | position_discipline: *within_rules* | conviction_score: 3

3.2 Analytical / Technical

Data-driven decision maker who adapts to new information while maintaining structure.

Behavioral Signal	Score Weight
Exit adjusted based on new data	+2.0
Stop loss adjusted logically	+1.5
Pre-trade state: structured/neutral	+0.5
Execution: as planned or minor deviation	+0.5

Example Behavioral Fingerprint:

pre_trade_state: *structured_planned* | execution_discipline: *minor_deviation* | exit_behavior: *adjusted_new_data* | stop_loss_behavior: *adjusted_logically* | position_discipline: *within_rules* | conviction_score: 3

3.3 Emotional / Impulsive

Entries and exits influenced by feelings — FOMO, panic, or excitement.

Behavioral Signal	Score Weight
Pre-trade state: emotional	+2.5
Exit: emotion-driven	+2.5
Stop loss: moved emotionally	+2.5
Pre-trade state: reactive	+1.0

Example Behavioral Fingerprint:

pre_trade_state: *emotional* | execution_discipline: *major_deviation* | exit_behavior: *emotion_driven* | stop_loss_behavior: *moved_emotionally* | position_discipline: *slightly_oversized* | conviction_score: 4

3.4 Fear-Driven

Exits winners too early, avoids reasonable risk, second-guesses analysis.

Behavioral Signal	Score Weight
Recovery mode + losing trade	+1.5
Conviction score <= 2	+1.5
Exited a winner emotionally (fear)	+1.0

Example Behavioral Fingerprint:

pre_trade_state: *recovery_mode* | execution_discipline: *minor_deviation* | exit_behavior: *emotion_driven* | stop_loss_behavior: *respected* | position_discipline: *within_rules* | conviction_score: 2

3.5 Overconfident / Greedy

Oversizes positions, ignores stop losses, and maintains high conviction despite losses.

Behavioral Signal	Score Weight
High conviction (≥ 4) + losing trade	+2.5
Position: significantly/slightly oversized	+2.0
Emotional stop + oversized position	+1.5

Example Behavioral Fingerprint:

pre_trade_state: *reactive* | execution_discipline: *major_deviation* | exit_behavior: *emotion_driven* | stop_loss_behavior: *moved_emotionally* | position_discipline: *significantly_oversized* | conviction_score: 5

3.6 Contrarian

Goes against consensus, takes unconventional positions with conviction.

Behavioral Signal	Score Weight
Reactive entry + winning trade	+1.5
High conviction (≥ 4) + winning trade	+0.5

Example Behavioral Fingerprint:

pre_trade_state: *reactive* | execution_discipline: *exactly_as_planned* | exit_behavior: *adjusted_new_data* | stop_loss_behavior: *adjusted_logically* | position_discipline: *within_rules* | conviction_score: 4

3.7 Gambler

No consistent plan, random entries and exits, treats trading like a game of chance.

Behavioral Signal	Score Weight
Execution: no plan	+3.0
Exit: no clear reason	+2.0
Stop loss: none	+2.0
Position: not defined	+1.5

Example Behavioral Fingerprint:

pre_trade_state: *emotional* | execution_discipline: *no_plan* | exit_behavior: *no_clear_reason* | stop_loss_behavior: *no_stop_loss* | position_discipline: *not_defined* | conviction_score: 3

4. What the ML System Learns About Each Profile

The ML system doesn't just classify — it **continuously learns** from each profile's trading outcomes. Here's what the system tracks and learns for each archetype:

Disciplined / Process-Oriented

- Confirms that rule-following correlates with consistent returns
- Learns optimal strategy types where discipline provides highest edge (trend-following)
- Calibrates confidence upward over time — reduces unnecessary hedging suggestions
- Identifies the rare scenarios where discipline breaks down (high-volatility events)

Analytical / Technical

- Maps which technical setups produce best results for this trader's style
- Learns that data-driven adjustments during trades improve (not hurt) outcomes
- Detects analysis paralysis patterns — when over-analysis delays execution on day trades
- Optimizes the recommendation detail level (more data = better for this profile)

Emotional / Impulsive

- Tracks which emotional states (FOMO, panic, excitement) precede the worst losses
- Learns the optimal position size reduction that reduces emotional pressure without eliminating upside
- Detects improvement patterns — when emotional exits decrease over time, the system rewards with wider targets
- Identifies the specific market conditions (high volatility, news events) that trigger impulsive behavior

Fear-Driven

- Measures the 'exit too early' pattern — how much profit is left on the table
- Learns to push TP targets further when fear-based exits are declining
- Tracks the correlation between reassuring guidance and improved hold times
- Detects when fear is justified (drawdown clusters) vs. when it's irrational (normal pullbacks)

Overconfident / Greedy

- Quantifies the damage of position oversizing — maps loss severity to position size violations
- Learns the threshold where confidence becomes detrimental (typically conviction ≥ 4 with negative outcomes)
- Tracks whether grounding guidance reduces oversizing behavior over time
- Identifies which strategies amplify overconfidence (leveraged products, short-term options)

Contrarian

- Maps which contrarian setups have positive expected value vs. which are just 'fighting the trend'
- Learns the optimal timing buffer — how long to wait after a trend reversal signal before entry
- Detects when contrarian conviction is backed by real edge vs. stubbornness
- Calibrates stop-loss width based on historical contrarian setup volatility

Gambler

- Tracks whether directive guidance produces any behavioral change over time
- Measures the rate of plan adoption (does the trader start defining stops after being told to?)
- Identifies if the 'gambler' classification is temporary (new trader) vs. structural (persistent pattern)
- Progressively restricts access to high-risk strategies until behavioral improvement is demonstrated

5. How Recommendations Improve Each Profile

The system applies a **Profile x Horizon Adjustment Matrix** — each of the 7 profiles has unique adjustments for Day Trading, Swing Trading, and Long-Term positions. These adjustments modify 5 recommendation parameters:

- **Confidence Buffer** — Raises or lowers the displayed trade confidence score (range: -15 to +5)
- **Stop-Loss Multiplier** — Widens (>1.0) or tightens (<1.0) the recommended stop-loss distance
- **Position Size Factor** — Shrinks (<1.0) the suggested position to reduce emotional exposure
- **Risk Emphasis** — Controls how prominently risk warnings are displayed (high/moderate/low)
- **Tone & Guidance** — Personalized language adapted to the trader's psychological profile

5.1 Complete Profile x Horizon Adjustment Matrix

Profile	Horizon	Conf. Buffer	Stop Mult.	Pos. Size	Risk	Tone
Disciplined / Process-	Day	0	1.00x	1.00x	Moderate	Standard
Disciplined / Process-	Swing	0	1.00x	1.00x	Moderate	Standard
Disciplined / Process-	Long-Term	+2	1.00x	1.00x	Low	Supportive
Analytical / Technical	Day	0	1.00x	0.95x	Moderate	Data_Rich
Analytical / Technical	Swing	0	1.00x	1.00x	Moderate	Data_Rich
Analytical / Technical	Long-Term	0	1.00x	1.00x	Moderate	Data_Rich
Emotional / Impulsive	Day	-8	1.30x	0.70x	High	Calming
Emotional / Impulsive	Swing	-5	1.15x	0.80x	High	Calming
Emotional / Impulsive	Long-Term	-3	1.20x	0.80x	High	Calming
Fear-Driven	Day	+3	0.90x	0.85x	Moderate	Reassuring
Fear-Driven	Swing	+5	0.95x	0.90x	Moderate	Reassuring
Fear-Driven	Long-Term	+5	1.00x	0.90x	Low	Reassuring
Overconfident / Greedy	Day	-12	1.00x	0.60x	High	Grounding
Overconfident / Greedy	Swing	-10	1.00x	0.65x	High	Grounding
Overconfident / Greedy	Long-Term	-8	1.10x	0.70x	High	Grounding
Contrarian	Day	-3	1.10x	0.85x	Moderate	Balanced
Contrarian	Swing	0	1.05x	0.90x	Moderate	Balanced
Contrarian	Long-Term	+2	1.00x	0.95x	Moderate	Balanced
Gambler	Day	-15	1.40x	0.50x	High	Directive
Gambler	Swing	-12	1.30x	0.55x	High	Directive
Gambler	Long-Term	-10	1.25x	0.60x	High	Directive

Key Insight: The Gambler profile has the most aggressive adjustments — confidence buffer of -15 (Day), stop multiplier of 1.4x (widest), and position size of 0.5x. This means a Gambler's trade recommendations are 50% smaller and carry 40% wider stops. In contrast, the Disciplined profile operates at full capacity (1.0x across all parameters).

6. Before vs After ML: TP1/TP2/SMC/Stop Loss Changes

This section shows exactly how TP1, TP2, SMC scores, and stop-loss levels change before the ML system learns the trader's profile versus after. Each example uses real trade parameters from our verification testing.

Profile	Before Score	After Score	+/-	Before Decision	After Decision	Before Stop	After Stop	Stop Change
Disciplined / Process-	81	92	+11	APPROVE	APPROVE	\$175.20	\$175.60	\$+0.40
Analytical / Technical	78	91	+13	APPROVE	APPROVE	\$407.80	\$408.90	\$+1.10
Emotional / Impulsive	32	86	+54	REJECT	APPROVE	\$172.80	\$174.60	\$+1.80
Fear-Driven	76	93	+17	WARN	APPROVE	\$174.50	\$175.80	\$+1.30
Overconfident / Greedy	28	90	+62	REJECT	APPROVE	\$171.20	\$174.90	\$+3.70
Contrarian	79	93	+14	WARN	APPROVE	\$408.30	\$410.10	\$+1.80
Gambler	5	12	+7	REJECT	REJECT	None	\$172.40	Added

7. Real Examples for All 7 Profiles

7.1 Disciplined / Process-Oriented

Follows a plan consistently, respects risk rules, and executes with low emotional interference.

Metric	Before ML	After ML	Change
Entry Price	\$178.50	\$178.50	-
Stop Loss	\$175.20	\$175.60	+\$0.40
Take Profit 1 (TP1)	\$183.40	\$184.10	+\$0.70
Take Profit 2 (TP2)	\$188.90	\$190.20	+\$1.30
SMC Score	72	79	+7
ML Win Probability	68%	82%	+14%
Final Score /100	81	92	+11
Decision	APPROVE	APPROVE	Maintained

What Changed & Why: The ML system confirms the Disciplined trader's process is sound. It slightly tightens the stop loss (reducing max risk by \$40/contract), extends TP2 by \$1.30 (capturing more upside on winning trends), and boosts the SMC confidence score by +7 points. The score rises from 81 to 92, reflecting the system's trust in this trader's execution consistency.

7.2 Analytical / Technical

Data-driven decision maker who adapts to new information while maintaining structure.

Metric	Before ML	After ML	Change
Entry Price	\$415.20	\$415.20	-
Stop Loss	\$407.80	\$408.90	+\$1.10
Take Profit 1 (TP1)	\$427.50	\$428.80	+\$1.30
Take Profit 2 (TP2)	\$441.20	\$443.50	+\$2.30
SMC Score	70	77	+7
ML Win Probability	65%	80%	+15%
Final Score /100	78	91	+13
Decision	APPROVE	APPROVE	Maintained

What Changed & Why: The ML system recognizes the Analytical trader's data-driven adaptability. It tightens the stop by \$1.10 (respecting the trader's logical adjustments), extends TP1 by \$1.30 and TP2 by \$2.30 (rewarding disciplined multi-timeframe analysis). The ML win probability jumps from 65% to 80%, reflecting improved pattern recognition over time.

7.3 Emotional / Impulsive

Entries and exits influenced by feelings — FOMO, panic, or excitement.

Metric	Before ML	After ML	Change
Entry Price	\$178.50	\$178.50	-
Stop Loss	\$172.80	\$174.60	+\$1.80
Take Profit 1 (TP1)	\$182.40	\$183.80	+\$1.40
Take Profit 2 (TP2)	\$186.50	\$189.20	+\$2.70
SMC Score	45	62	+17
ML Win Probability	38%	72%	+34%
Final Score /100	32	86	+54
Decision	REJECT	APPROVE	Upgraded

What Changed & Why: This is the most dramatic transformation. Before ML, the Emotional trader's impulsive behavior (emotion-driven exits, moved stops) triggered a REJECT. After ML coaching: the stop is tightened from \$172.80 to \$174.60 (reducing max loss by 33%), TP targets are raised (system learned the trader now exits less impulsively), and the score surges from 32 to 86 — a +54 point improvement. The system detects that behavioral coaching has shifted execution from 'major_deviation' to 'minor_deviation'.

7.4 Fear-Driven

Exits winners too early, avoids reasonable risk, second-guesses analysis.

Metric	Before ML	After ML	Change
Entry Price	\$178.90	\$178.90	-
Stop Loss	\$174.50	\$175.80	+\$1.30
Take Profit 1 (TP1)	\$184.20	\$185.40	+\$1.20
Take Profit 2 (TP2)	\$190.80	\$192.60	+\$1.80
SMC Score	58	68	+10
ML Win Probability	60%	78%	+18%
Final Score /100	76	93	+17
Decision	WARN	APPROVE	Upgraded

What Changed & Why: The Fear-Driven trader's primary issue is exiting winners too early. The ML system addresses this by: (1) tightening the stop from \$174.50 to \$175.80 — reducing downside fear, (2) extending TP1 by \$1.20 and TP2 by \$1.80 — training the trader to hold through normal pullbacks. The confidence buffer goes from negative to positive, and the score jumps from 76 (WARN) to 93 (APPROVE). The system's reassuring tone shifts from 'avoid exiting too early' to 'your entries have merit — trust your levels.'

7.5 Overconfident / Greedy

Oversizes positions, ignores stop losses, and maintains high conviction despite losses.

Metric	Before ML	After ML	Change
Entry Price	\$178.50	\$178.50	-
Stop Loss	\$171.20	\$174.90	+\$3.70
Take Profit 1 (TP1)	\$185.80	\$184.20	-\$1.60
Take Profit 2 (TP2)	\$194.60	\$190.80	-\$3.80
SMC Score	40	58	+18
ML Win Probability	35%	70%	+35%
Final Score /100	28	90	+62
Decision	REJECT	APPROVE	Upgraded

What Changed & Why: The Overconfident trader was initially REJECTED: oversized positions + ignored stops. After ML learning: the stop is pulled dramatically closer (from \$171.20 to \$174.90 — 50% tighter), TP targets are moderated (reducing the 'home run' mindset that leads to holding losers), and position size factor drops to 0.6x. The score rises from 28 to 90 because the ML system detects improved discipline in recent trades — the trader is actually respecting the system's grounding guidance.

7.6 Contrarian

Goes against consensus, takes unconventional positions with conviction.

Metric	Before ML	After ML	Change
Entry Price	\$415.20	\$415.20	-
Stop Loss	\$408.30	\$410.10	+\$1.80
Take Profit 1 (TP1)	\$425.80	\$427.50	+\$1.70
Take Profit 2 (TP2)	\$438.50	\$441.80	+\$3.30
SMC Score	62	74	+12
ML Win Probability	62%	80%	+18%
Final Score /100	79	93	+14
Decision	WARN	APPROVE	Upgraded

What Changed & Why: The Contrarian trades against consensus — high reward but timing risk. The ML system learns to: (1) tighten the stop from \$408.30 to \$410.10 (limiting damage if the contrarian thesis fails), (2) raise TP2 by \$3.30 (rewarding conviction when the thesis works), (3) boost SMC from 62 to 74 (improved structure recognition). The decision upgrades from WARN to APPROVE as the system learns the Contrarian's wins outweigh losses when timing is right.

7.7 Gambler

No consistent plan, random entries and exits, treats trading like a game of chance.

Metric	Before ML	After ML	Change
Entry Price	\$178.90	\$178.90	-
Stop Loss	None	\$172.40	Added
Take Profit 1 (TP1)	None	\$183.50	Added
Take Profit 2 (TP2)	None	\$188.20	Added
SMC Score	15	28	+13
ML Win Probability	12%	22%	+10%
Final Score /100	5	12	+7
Decision	REJECT	REJECT	Maintained

What Changed & Why: The Gambler is the only profile where the ML system cannot fully recover the trader. Before ML: no stop loss, no targets, no plan — the system hard-rejects with a score of 5. After ML coaching: the system auto-generates conservative stops and targets (directive mode), and the score improves slightly to 12 — but remains REJECTED. This is intentional: the system protects the trader from themselves. The directive guidance reads: 'Define entry, stop, and target BEFORE placing any trade.' The ML system's most important lesson here: preventing bad trades is more valuable than improving mediocre ones.

8. Summary & Key Takeaways

- **Classification is behavioral, not self-reported.** The system watches what traders DO, not what they say. This eliminates the bias of self-assessment and produces accurate archetypes within 3-5 trades.
- **The ML system learns continuously.** Every trade outcome feeds back into the profile model. A Gambler who starts defining stops and following plans will be reclassified as their behavior improves.
- **Recommendations are profile-aware and horizon-specific.** A Fear-Driven trader's day trade gets tightened stops (reducing fear triggers), while their long-term positions get wider stops (reducing the urge to exit on normal pullbacks). The same trader receives different adjustments for different timeframes.
- **TP1/TP2/SMC adjust dynamically.** After ML learning, disciplined profiles see extended targets (the system trusts them to hold), while impulsive profiles see conservative targets (reducing the temptation to override the plan).
- **The Gambler is an intentional safety net.** The system cannot make a plan for someone who has none. The Gambler profile exists to protect traders from catastrophic losses until they develop basic discipline. This is the only profile that remains REJECTED even after ML learning.
- **Win rate improvement is profile-weighted.** The biggest ML improvement comes from the middle profiles (Emotional, Fear-Driven, Overconfident) — these traders have skill that is being undermined by behavioral patterns. Fixing the behavior unlocks the skill. Disciplined/Analytical profiles already operate near their ceiling.

Metric	Before ML (Baseline)	After ML (Enhanced)	Improvement
Overall Win Rate	43%	81%	+38%
Total P&L (21 trades)	\$4,131	\$33,796	+\$29,665
Avg Score (non-Gambler)	72	91	+19
Avg SMC Score	54	68	+14
Profiles at 100% WR	2/7	5/7	+3 profiles
Profiles still REJECTED	3/7 (partial)	1/7 (Gambler only)	Safety maintained

This document was auto-generated by the EI ALGOS Profile Intelligence System. All data, scores, and examples are derived from real system calculations and verification test runs.