



**\*\*Aethion Whitepaper - v1.0\*\***

Project Name: Aethion

Domain: aethion.ai

Trade with precision AI

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## 1. Introduction

Aethion is an AI-powered algorithmic trading system that uses a hybrid ensemble of LSTM, Transformer, CNN, and PPO models to support real-time trading decisions with adaptive intelligence built to navigate modern crypto markets with precision, speed, and intelligence. Using deep learning ensembles and reinforcement learning agents, Aethion autonomously executes high-confidence trades in volatile environments. This document outlines the vision, architecture, and token model supporting the Aethion ecosystem.

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## 2. Vision

To democratize access to institutional-grade trading intelligence through an autonomous and adaptive AI system. Aethion aims to empower individual and professional traders with:

- AI-optimized trading decisions
- Transparent, data-driven models
- Token-based access and governance

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## 3. Problem

Retail traders face:

- Emotional and biased decisions
- Information overload
- Latency in reacting to market conditions

Aethion solves this with:

- Real-time AI models predicting trade direction, size, and confidence, where confidence is calibrated using logistic regression and the PPO agent operates on a 33-dimensional input vector incorporating trend, volume, and EMA slope features
- Dynamic SL/TP, trailing stop, and volatility filters
- Continuous learning through live feedback and reinforcement

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#### 4. Core Components

- Deep Learning Ensemble: A hybrid architecture combining LSTM, Transformer, and CNN models. Each model is trained with an identical set of 32 market features to ensure consistency and alignment across architectures.
- Meta-model (XGBoost): Combines predictions from all base models to produce a final decision. The meta-model uses up to 34 engineered features including volatility, volume, trend strength, VWAP deviation, and momentum signals.
- PPO Agent: Reinforcement learning agent using a CNN+LSTM architecture and 33-dimensional input vectors (including technical indicators and calibrated confidence scores). Continuously improves via live trade feedback.
- Dynamic SL/TP Engine: Take-profit and stop-loss levels are calculated dynamically based on ATR (Average True Range), trend strength, and model confidence, ensuring market-adaptive risk control.
- Real-time Feature Extraction: Engineered indicators are updated live, including VWAP distance, volume delta, EMA slopes, Bollinger band width, Z-score, and others.
- AI Signal Filtering: Risk-aware decision filters such as volatility caps, flip-flop avoidance, VWAP deviation, and power ratio thresholds protect against suboptimal trades.
- Infrastructure: Modular Python backend, websocket streaming, async Binance integration, autoscaling trade execution logic.
- Dashboard (Planned): Live trade tracking, signal visibility, historical PnL, and staking interface for \$AETHN.

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#### 5. AETHN Token

Aethion will issue an ERC-20 token: \$AETHN

Utility:

- Access to Aethion trading bot (monthly staking)
- Unlock advanced features (ETH/SOL/MULTI-ASSET support)
- Revenue-sharing through staking pools
- DAO voting power for future upgrades and assets

Token Distribution

- 40% Community & Public Sale
- 20% Staking & Rewards
- 15% Team & Development
- 10% Treasury & Operations
- 10% Liquidity Reserve
- 5% Advisors

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#### 6. Roadmap

Q2 2025 - Private DRY\_RUN phase, MVP live bot on BTC/USDC

Q3 2025 - Launch of AETHN token

Q4 2025 - Website/dashboard alpha

2026 - Multi-asset expansion (ETH, SOL) + mobile UI

2026+ - Community governance, auto-deployable AI agents, open SDK

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#### 7. Legal Disclaimer

Aethion is a technology project. \$AETHN is a utility token, not a financial security. This document is for informational purposes only.

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