

ZIGMA: The Misprice Auditor for Prediction Markets

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Disclaimer: ZIGMA is not a trading bot, oracle, or predictor. It detects structural mispricings in prediction markets and stays silent otherwise. It does not guarantee outcomes, profits, or advice. All signals are for informational purposes. ZIGMA does not hold or manage funds. Token holders gain premium access; public users get basic signals via X/TG. This document is the single source of truth for content, development, planning, features, premium services, architecture, use cases, roadmap, website, user journey, integrations, and everything ZIGMA.

Executive Summary (One-Pager)

ZIGMA is a deterministic, auditable AI oracle that scans prediction markets and outputs delta-based conviction signals only when edge survives uncertainty, liquidity, entropy, and time. ZIGMA does not predict the future ; it detects when the market is structurally wrong and stays silent otherwise.

Tagline: Silence is Discipline.

Core Insight: Most losses in prediction markets come from trading noise. ZIGMA says NO_TRADE until evidence pressure overwhelms market price.

USP:

- Delta-Only Intelligence: Mechanical odds via explicit deltas (news, structure, behavior, time).
- NO_TRADE First: Abstains on low edge (<8%).
- Full Audit Trail: Every signal replayable (Market X% → ZIGMA Y% | Reason Z).
- Entropy-Adjusted Edge: Discounts for uncertainty/liquidity.
- Deterministic & Reproducible: Cached by marketID + day.
- Conviction Tiers: A/B/C exposure bands (no Kelly).

Market Opportunity: Prediction markets hit \$10B+ monthly volume in 2025 (Polymarket + Kalshi). No trusted, silent-when-no-edge auditor exists. ZIGMA fills the oracle layer gap for traders/protocols.

Token Utility: Fair launch. Burn for premium: early signals, deep audits, analytics, API limits. Deflationary, usage-aligned.

Roadmap Highlights:

- V1 Live: Core auditor.
- V1.5: X/TG distribution.
- V2: Dashboard + track record.
- V3: Multi-market expansion.
- V4: Oracle ecosystem.

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Vision & Manifesto

Prediction markets promise truth through incentives, but in reality, they are riddled with noise, hype, and unexplainable signals. Traders chase headlines, bots spam low-edge trades, and ambiguity in resolutions leads to disputes. ZIGMA exists to cut through this chaos.

We do not predict the future. We do not generate probabilities from thin air. We do not trade often.

ZIGMA is a misprice auditor. It scans for structural discrepancies where market odds diverge from evidence due to lag, bias, or inefficiency and stays silent otherwise. Our mantra: The game is not about being right; it's about knowing when not to play.

In a world of overconfident oracles, ZIGMA is the skeptic with proof. We believe silence is the ultimate discipline. When ZIGMA speaks, it's because the edge is measurable, auditable, and survivable. Our users aren't gamblers; they're auditors demanding transparency.

ZIGMA is built for the long game: trust compounds through rare, high-conviction signals. We envision a future where "What does ZIGMA say?" becomes the first question before any bet.

Core Features & Architecture

ZIGMA's architecture is modular, deterministic, and production-hardened, built in Node.js with SQLite persistence, Tavily for real-time news, and a mechanical probability engine. No LLM

hallucinations, probabilities are 100% math-derived with explicit deltas. The system is stateless for scalability, with env-based configs for premium modes.

Key Features

1. Market Ingestion Layer (Polymarket Gamma API)

- Fetches 500+ markets in <2s.
- Filters: Active only, no closed/expired, liquidity >\$1k, no dead markets (probs >99%/ <1%).
- Enriches with prices, volumes, deltas.
- Discovery: Baseline edge scan (P_{prior} vs P_{market}), price/volume spikes, new markets.

2. News Cross-Ref Layer (Tavily API)

- Real-time search: 5 sources per market, optimized query ("question + latest news").
- Price-drift trigger: Skip if delta <5% and news <15min old — saves 80% costs.
- Fallback: Empty [] → LLM base knowledge.

3. Probability Auditor Engine

- Canonical model: $P_{\text{sigma}} = \text{clamp}(P_{\text{market}} + \text{deltas}, 0.01-0.99)$.
 - Deltas: News (+0.20 if headlines), Structure (-0.10 if regulatory), Behavior (+0.05 if velocity >100), Time (-0.30 if <30 days).
- Edge calc: $|P_{\text{sigma}} - P_{\text{market}}|$ — threshold $\geq 8\%$ for signal.
- Effective edge: Raw edge adjusted for confidence/entropy/liquidity.
- Survivability: Short/long-term test (e.g., time-sensitive vs durable).

4. Signal Generation with Guardrails

- Single-Reason Rule: Pick one primary (NEWS_LAG, TIME_DECAY_ERROR, etc.).
- NO_TRADE First: On low edge, no trigger, or failure.
- Conviction Tiers: A (exposure 3%), B (2%), C (1%) — no Kelly.
- Output: "Market X% → ZIGMA Y% | Edge Z% | Primary: REASON | Deltas: full chain".

5. Risk & Safety Layer

- Liquidity $\geq \$75k$.
- Volatility lock: No trade on high entropy.
- Liquidity shock exit: If liq drops >20%, flag AVOID.
- NO_SIGNAL_MODE: Env flag for silence-only.

6. Adversarial Defense (New)

- Cross-Venue Correlation (CVC): No trade if P_{poly} moves >15% without $P_{\text{kalshi}} > 5\%$ — flags LIQUIDITY_ATTACK, FORCED_SILENCE.
- Multi-Agent Red Team: Bull (wins), Bear (fails), Auditor (evaluates) — signal only if Auditor confidence >0.85.

7. Resolution Guardrail (New)

- Pull market rules text.
- Semantic analysis: If "sign EO" but fine print "published in Federal Register" → $\Delta_structure$ -100% if timeline impossible.

Architecture Overview

- **Backend:** Node.js + SQLite (tables: analysis_cache, volume_snapshots, trades_log).
- **Dependencies:** Axios (API), better-sqlite3 (DB), dotenv (env).
- **Cycle Flow:** Fetch → Filter → Enrich (deltas/velocity) → Baseline scan → News (Tavily) → Prob engine → Signal/NO_TRADE → Log/Post.
- **Scalability:** Stateless cycles (1min cron), cache for news/probs.
- **Security:** Env keys, no globals, try-catch everywhere.
- **Premium Mode:** Env flag → holders get full deltas, early signals, deep audits. Public: basic NO_TRADE/SIGNAL.

Fetch → Scan → Deltas → Edge Check → Signal.

Use Cases

ZIGMA serves traders, protocols, and researchers who need trusted, auditable edges without noise.

1. Retail Trader (Public User)

- Journey: Follow X/TG for rare signals. See "NO_TRADE" most days → builds trust.
- Use: Check ZIGMA before betting on Polymarket. Example: Weed signal with explicit delta chain → user shorts hype.

2. Premium Holder (Token Burn)

- Journey: Burn token for premium TG channel/dashboard access.
- Use: Early signals (pre-public), deep audits (full survivability), historical replays. Example: NVIDIA edge with entropy adjustment → holder positions early.

3. Protocol Integration (Developer API)

- Journey: API key via token hold.
- Use: Embed ZIGMA as oracle layer in bots/apps. Example: DeFi protocol uses edge calc for auto-arbitrage on correlated markets.

4. Research/Institutions

- Journey: Premium analytics.
- Use: Track mispricings over time. Example: Study regulatory deltas in 2025 markets.

5. Adversarial Scenarios

- Use: CVC detects spoofing — NO_TRADE on manipulated liquidity. Red Team prevents LLM vibes. Resolution guardrail avoids ambiguity traps.

User Journey

Public User (Free Tier)

1. Discovery: See X post: "ZIGMA SIGNAL: Market X% → ZIGMA Y% | Edge Z% | NO_TRADE most days."
2. Engagement: Follow TG for daily silence → curiosity builds.
3. Value: Rare BUY YES → check Polymarket, see edge.
4. Upgrade: Burn token for premium.

Premium Holder (Token-Gated)

1. Acquisition: Fair launch → hold/burn for access.
2. Onboarding: TG channel/dashboard login via wallet.
3. Daily Use: Early signals, full chains, audits.
4. Retention: Track record stats → see wins.

Developer/Integrator

1. Discovery: Website API docs.
2. Integration: Env key → call /signals endpoint.
3. Value: Embed in bots (e.g., auto-alert on 8%+ edge).

Visual: Funnel diagram — Public (X/TG silence) → Premium (burn for depth) → Pro (API integrations).

Roadmap

V1 — Core Auditor (Live Now, Q4 2025)

- Mechanical engine + Tavily news.
- Explicit deltas + NO_TRADE guards.
- Public signals on X/TG (rare, credible).
- Track record logging.

V1.5 — Distribution (Q1 2026)

- Fair token launch (deflationary, burn utility).
- Token-gated premium: Early signals, deep audits.

- X/TG bots for public basics.
- Community governance start (signal feedback).

V2 — Analytics (Q2 2026)

- Public dashboard (track mispricings, stats).
- Historical replay + performance metrics.
- Premium: Custom audits, edge alerts.

V2.5 — Public ZIGMA Basket (Q3 2026)

- Observable non-custodial strategy (e.g., on-chain mirror of signals).
- Token burn for basket access/insights.

V3 — Multi-Market Expansion (Q4 2026)

- Integrate Kalshi, on-chain markets (e.g., Augur, Gnosis).
- CVC for spoof detection across venues.
- Multi-agent red team full rollout.

V3.5 — Assisted Automation (Q1 2027)

- Optional execution hooks (e.g., wallet connect for NO_TRADE alerts).
- Strict caps on automation.

V4 — Oracle Ecosystem (Q2 2027+)

- Developer API (premium integrations).
- Research tools (delta datasets).
- Partnerships (protocols use ZIGMA as oracle layer).

Visual Timeline: Horizontal bar with milestones, icons (check for V1, rocket for launch, graph for V2, chain for V3).

Token Utility & Economics

Token Name: ZIGMA (deflationary, fair launch — no VC/pre-mine).

Utility (Burn-Only Model):

- Burn for premium feeds (early signals, full deltas).
- Burn for deep audits (custom market analysis).
- Burn for historical analytics (replays, stats).

- Burn for API rate limits (developers).

Economics:

- Total supply: Fixed (e.g., 1B).
- Burn mechanics: Every premium access burns tokens → deflation.
- No yield/farming — pure usage demand.
- Holders: Governance (signal params, priors).

This aligns incentives: More users = more burns = scarcity = value.

Development & Planning

Dev Philosophy: Deterministic, auditable, no LLM opinions — math + news only. Silence over spam.

Codebase Structure (Node.js):

- `src/index.js`: Main cycle (fetch, analyze, signal).
- `src/processor.js`: Market helpers, news ref, selection.
- `src/llm.js`: Parsing, deltas (mechanical).
- `src/db.js`: Cache, track record.
- `.env`: Keys, modes (`PREMIUM_MODE=true` for holders).

Planning Milestones (Beyond Roadmap):

- Q4 2025: Token launch prep (smart contract audit).
- Q1 2026: Community airdrop to early testers.
- Ongoing: Weekly track record reports on X.

Integration Strategy:

- X/TG Bots: Public signals (basic).
- Website/Dashboard: Premium login via wallet (burn token for access).
- API: Rate-limited endpoint (`/signals?marketId=`) — burn for higher limits.
- Future: On-chain oracle (e.g., Chainlink integration for protocols).

Content & Messaging

All content honest: "ZIGMA does not predict. It audits." Use in X/TG: Rare posts with full chains.