AI Stock Oracle – Full Specification (Bad Mamma Jamma Edition)

Executive Summary

AI Stock Oracle is a real-time intelligence platform that scours every public data stream—federal/state RFPs, news, Reddit, LinkedIn, utility filings—to find under-the-radar suppliers whose activity surges in lockstep with AI hyperscalers, power utilities, and water/cooling systems. It calculates a Rolling Growth Index for each supplier, correlates against Big 3 (AI, power, water) sector baselines, and generates Watch Events when correlation exceeds 0.8. Subscribers get tiered alerts, a dashboard, and API access.

Background & Rationale

AI compute demand is exploding. By 2030, global electricity demand for AI-specific data centers could hit 1,500 TWh—more than India uses today. Infrastructure suppliers (picks & shovels) will benefit most. The Oracle detects synchronized growth across AI, power, and water suppliers—the secret-sauce trigger.

Project Objectives

Capture signals (SAM.gov, Reddit, job posts, filings). Use spaCy/Legal-BERT/OpenIE for entity and clause extraction. Cross-correlate obscure suppliers to Big 3 sector growth curves. Score them. Deliver tiered alerts and dashboards. Monetize via subscriptions and grants.

Data Sources

Federal: SAM.gov API. State: California eProcure, Texas SmartBuy. News: NewsAPI. Social: Twitter API, Reddit. Forums, job boards, council filings, PUC documents.

Technical Architecture

Ingest via Airflow. Store in S3. Process with Spark. NLP via spaCy, Legal-BERT, OpenIE. Time-series sync. Score & classify. Push to Postgres, Elasticsearch, Neo4j. Expose via FastAPI, display via Next.js frontend. Notify via SendGrid, Slack, Twilio.

Growth Sync Engine

Calculate Rolling Growth Index per supplier (mentions, job ads, leases, contracts). Cross-correlate with sector growth curves (AI, Power, Water). Trigger if r > 0.8.

Scoring & Risk Tiers

Oracle Score = weighted sum of SyncScore, AncillaryMatch, ContractSignal, minus penalties. Tier 1 = Low risk (known players). Tier 2 = Mid. Tier 3 = High risk (obscure sub-sub suppliers).

Example Walkthrough

Meta builds AI campus. Local glazing company expands. Reddit chatter + job listings spike. Correlation > 0.87. Oracle triggers. Two months later, company confirmed as subcontractor.

Diagrams (Text Version)

1) Ingestion → Processing → NLP → Scoring → Alerts. 2) Supplier RGI → Cross-correlation → Watch Trigger. 3) Trigger → Dossier → Score → Alert → Delivery.

Rollout Plan

Phase 1 (0–3 mo): MVP. Phase 2 (3–6 mo): Add state & Legal-BERT. Phase 3 (6–9 mo): Neo4j graphs. Phase 4 (9–12 mo): Scoring + alerts. Phase 5 (12–18 mo): API + enterprise UI.

Subscription Model

Basic: $99/mo (Tier 1). Pro: $499/mo (Tier 1–2, dashboard). Enterprise: $5K+/mo (Tier 1–3, API, custom alerts).

Funding & Compliance

DOE SBIR, NSF SBIR for AI infrastructure. GDPR/CCPA, SOC 2, EAR compliance.

Closing Summary

This is not just a monitoring system. It's a radar for the supply chain shadows—chairs, fiber, uniforms, cameras, canteens. Predictive, multi-sector synchronized, and tiered for different investor appetites.