■ PRD: Unusual Options Activity Signal Bot

Goal:
Build a system that scans live unusual options activity (UOA) across a selected universe of small–mid cap stocks, identifies high-conviction trades based on rules, and instantly notifies the user via Twilio SMS or Lovable dashboard alerts. Initial phase: paper trading only — no live funds or broker execution.

Objectives:
• Detect high-signal UOA (unusual call/put sweeps).
• Focus on small–mid cap stocks.
• Alert instantly via Twilio SMS.
• Support paper trading via Supabase.
• Future expandability (insiders, earnings context, live trading).

Core Features (Phase 1 MVP):
Data Ingestion: Poll or subscribe to UOA API feeds (Tradier, Intrinio, etc.).
Signal Engine: Filters trades by premium > $50k, Volume/Open Interest > 3$\times$, expiration $\leq$ 45 days.
Notifications: Twilio SMS + Lovable dashboard.
Paper Trading: Simulated order creation and P/L tracking in Supabase.
Dashboard: Live feed of signals, ticker pages, and P/L summaries.

Architecture Overview:
Frontend: Lovable (React + Supabase).
Backend: Cursor or Claude Code (Node/TS via serverless).
Database: Supabase (Postgres).
Messaging: Twilio SMS.
Execution: Paper trading simulation.

Roadmap:
P0 – Setup schema & API connection (1 week).
P1 – Automated polling + alerts (2 weeks).
P2 – Paper trading dashboard (1 week).
P3 – Insider & earnings data integration (2 weeks).
P4 – Live broker execution (future).

Success Metrics:
• Alert latency < 60s.
• 30%+ signals profitable within 24h.
• 98%+ SMS delivery.
• 99%+ dashboard uptime.