

CEREBRO-Lite v1.0

Streamlined Pattern Recognition Engine

Classification	Tier 2 — Cognitive Architecture
Type	Pattern Recognition / Multi-Framework Analysis
Status	PRODUCTION READY
Parent System	CEREBRO v3.5 (18-Framework Edition)
Frameworks	5 Core Frameworks
Analysis Time	15-30 minutes

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Release Date: November 2025

AION Cognitive Engines

Executive Summary

CEREBRO-Lite v1.0 is a streamlined 5-framework pattern recognition engine designed for everyday business decisions and strategic analysis. Unlike the full CEREBRO system (18 frameworks), CEREBRO-Lite applies the 80/20 principle to select the 5 most impactful frameworks that cover 80% of decision-making scenarios.

Core Value Proposition:

- Multi-perspective analysis through 5 independent expert lenses
- Contamination-free reasoning (frameworks analyze independently)
- Confidence-calibrated output (STRONG/MODERATE/WEAK)
- Actionable recommendations prioritized by leverage

The 5 Core Frameworks

Framework	Expert	What It Does
MEADOWS	Donella Meadows	Systems thinking, leverage points (1-12 scale)
KAHNEMAN	Daniel Kahneman	Cognitive bias detection, System 1/2 analysis
SUN TZU	Sun Tzu	Strategic positioning, competitive analysis
PEARL	Judea Pearl	Causal inference, correlation vs causation
TALEB	Nassim Taleb	Anti-fragility, stress testing, optionality

Polymath Enhanced Features (v1.0)

1. Pattern Confidence Decay Calculator

Tracks how pattern confidence degrades over time as conditions change. Uses domain-specific decay rates to calculate time-adjusted confidence levels.

Domain	Half-Life	Decay Rate
Technology trends	6 months	0.115
Market dynamics	12 months	0.058

Organizational patterns	24 months	0.029
Human psychology	60 months	0.012

2. Cross-Domain Pattern Bridge

Identifies when patterns from one domain apply to another domain through structural isomorphism detection and mechanism transfer validation.

Source Domain	Pattern	Target Applications
Biology	Immune system	Cybersecurity, organizational resilience
Physics	Network effects	Social platforms, marketplace dynamics
Evolution	Adaptation	Product-market fit, competitive strategy
Ecology	Carrying capacity	Market saturation, resource limits

Usage Syntax

Basic Usage:

CEREBRO-LITE ANALYZE:

Subject: [Your decision/problem/question]

Context: [Optional: Relevant background]

Goal: [What you want to achieve]

Advanced Modes:

[CEREBRO-LITE:MEADOWS] – Systems analysis only

[CEREBRO-LITE:KAHNEMAN] – Bias detection only

[CEREBRO-LITE:SUN TZU] – Strategic analysis only

[CEREBRO-LITE:PEARL] – Causal inference only

[CEREBRO-LITE:TALEB] – Anti-fragility only

[CEREBRO-LITE:BRIDGE] – Cross-domain pattern bridging

[CEREBRO-LITE:DECAY] – Pattern confidence decay analysis

Confidence Calibration

Level	Criteria	Interpretation
STRONG	3+ frameworks agree	High confidence, act on this
MODERATE	2 frameworks agree	Medium confidence, validate further
WEAK	1 framework only	Interesting but requires validation
CONTRADICTION	Frameworks disagree	Requires user judgment

Best Use Cases

- Business Strategy — Multi-framework covers all strategic angles
- Investment Decisions — Bias detection + anti-fragility stress test
- Hiring/Firing — Systems thinking + causal reasoning

- Market Entry — Strategic positioning + leverage points
- Partnership Evaluation — Causal analysis + anti-fragility
- Problem-Solving — Systems mapping + bias detection

Implementation Status

Overall LLM Approximation Effectiveness: 73% of ideal capability

Capability	Effectiveness
Framework Independence	75%
Confidence Calculation	65%
Cross-Domain Bridging	70%
Synthesis Quality	80%
Meadows (Systems)	75%
Kahneman (Bias)	80%
Pearl (Causality)	70%
Taleb (Anti-Fragility)	75%

Ethical Guardrails

Will Recommend:

- Legitimate competitive strategies
- Ethical business decisions
- Fair treatment of stakeholders
- Transparent practices

Will NOT Recommend:

- Deceptive practices
- Manipulation of vulnerable populations
- Strategies that externalize harm
- Unethical competitive tactics

Transparency & Limitations

What CEREBRO-Lite IS:

- Systematic methodology for multi-perspective analysis
- Way to reduce single-perspective blindness
- Tool that makes YOUR thinking more rigorous

What CEREBRO-Lite IS NOT:

- 5 independent AI agents running in parallel
- A way to channel actual experts
- A system that guarantees perfect pattern detection
- Magic cognitive enhancement technology

Gödelian Acknowledgment: CEREBRO-Lite cannot verify it found ALL patterns. Unknown unknowns may exist outside the 5 frameworks.

Humanity's cognitive infrastructure for the AI age.

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