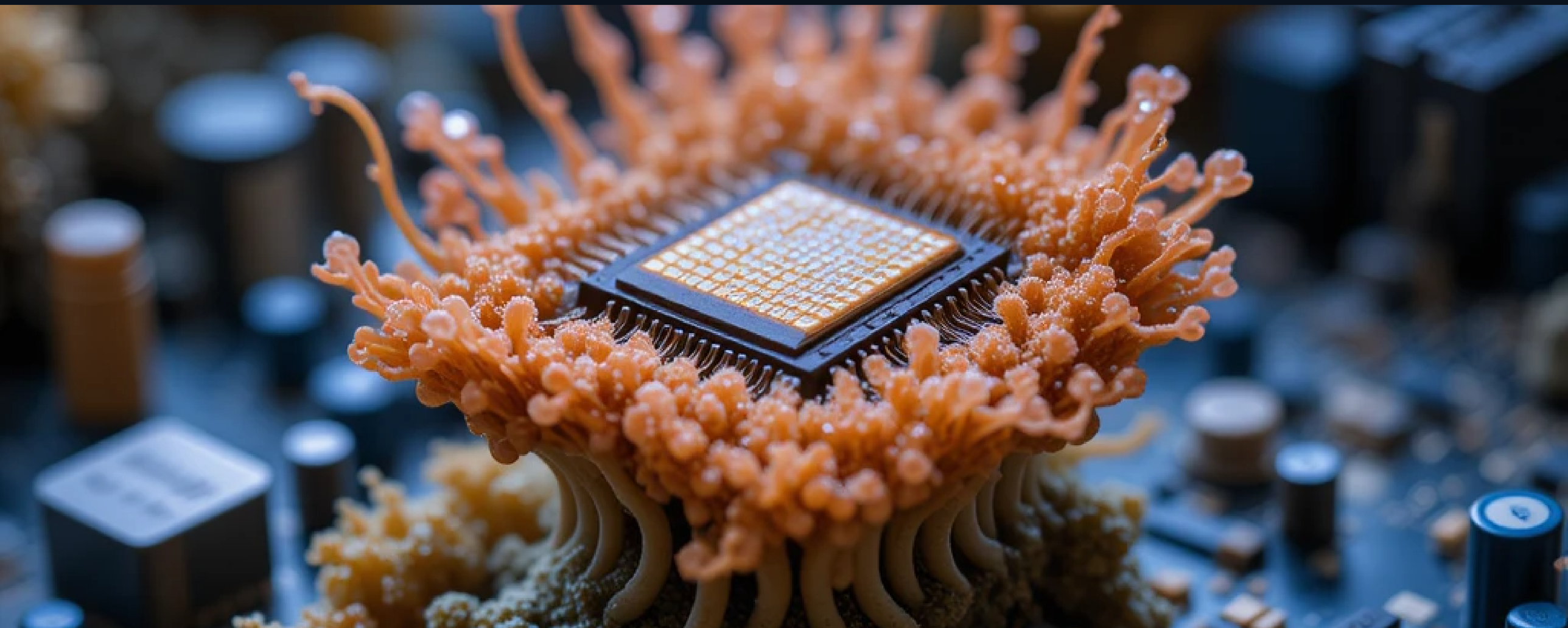
appliedAIstudio

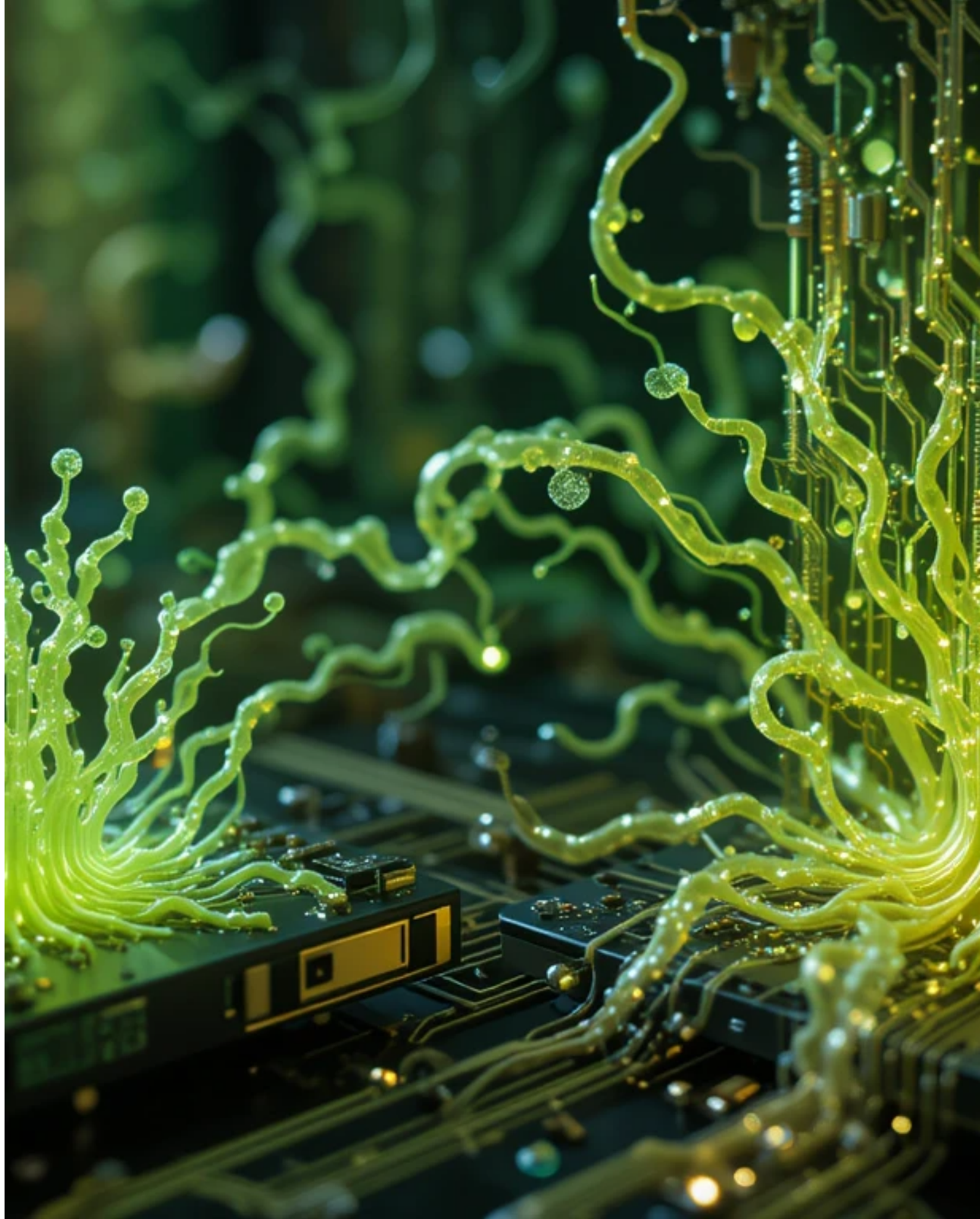
Bio-Inspired Artificial Intelligence

We design AI that behaves more like living systems-- that can reason, self-correct, and act responsibly on decentralized rails.



PhysarAI: AI that Reflects Before It Acts

- Bio-inspired reasoning engine that helps AI reason, reflect, and adjust before taking steps.
- Implements structured introspection loops, where agents learn without external labels and build auditable memory of their reasoning.
- Creates agents that are not just smarter, but also more self-aware and trustworthy



Inhibition: Giving AI a Conscience

- A structural layer that checks each reasoning step in real time, not just the final output.
- Operates like a conscience, guiding adjustments before they lead to harm.
- Built on a Reason–Observe–Adjust loop, ensuring every decision remains transparent and interruptible.
- Enables agents to act safely in regulated, high-stakes domains by embedding ethics directly into their thought process

Execution: AI that Adapts in Complex Environments

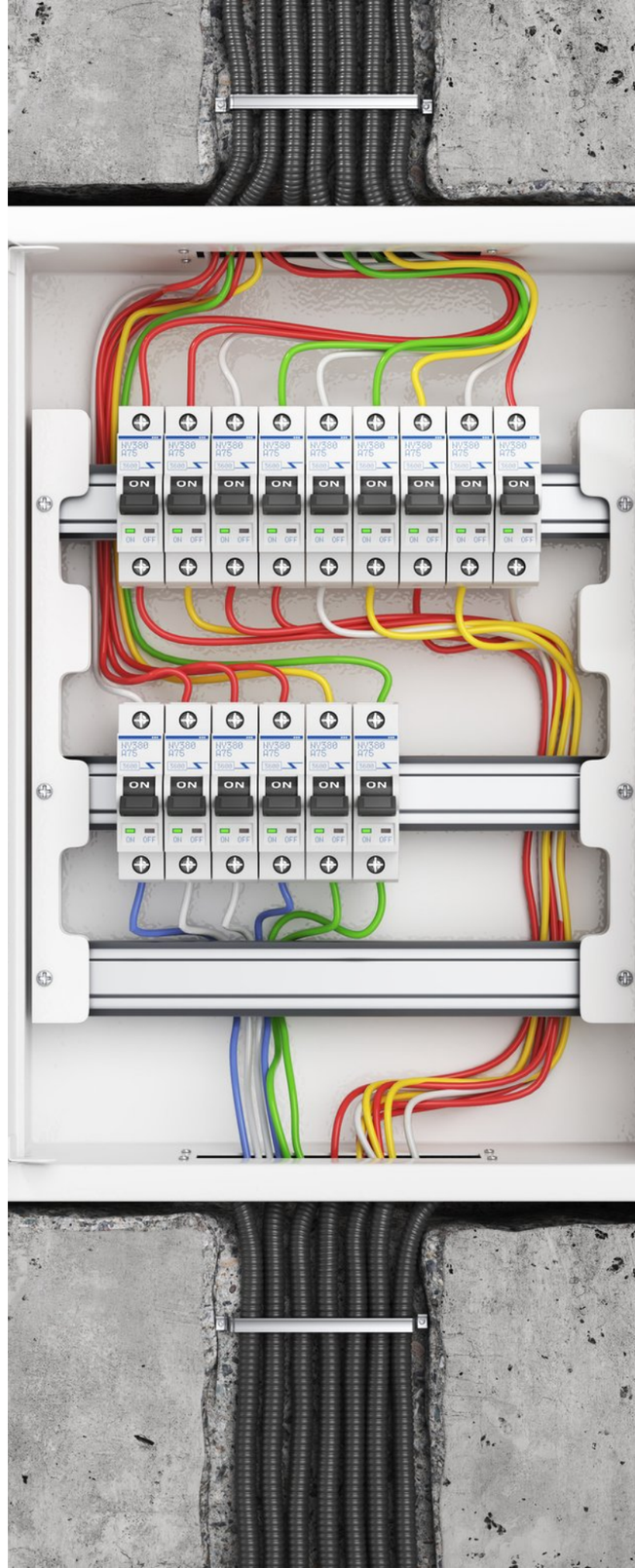
- Inspired by how living systems move with timing and coordination, not constant motion.
- Turns validated strategies into precise, adaptive action across complex networks.
- We started with DeFi systems — reallocating liquidity, arbitraging inefficiencies, compounding returns.
- Designed as a general action system: any domain where agents must act with timing, efficiency, and resilience.

The AI Inhibitor

Our product functions like an AI circuit breaker—an always-on layer that:

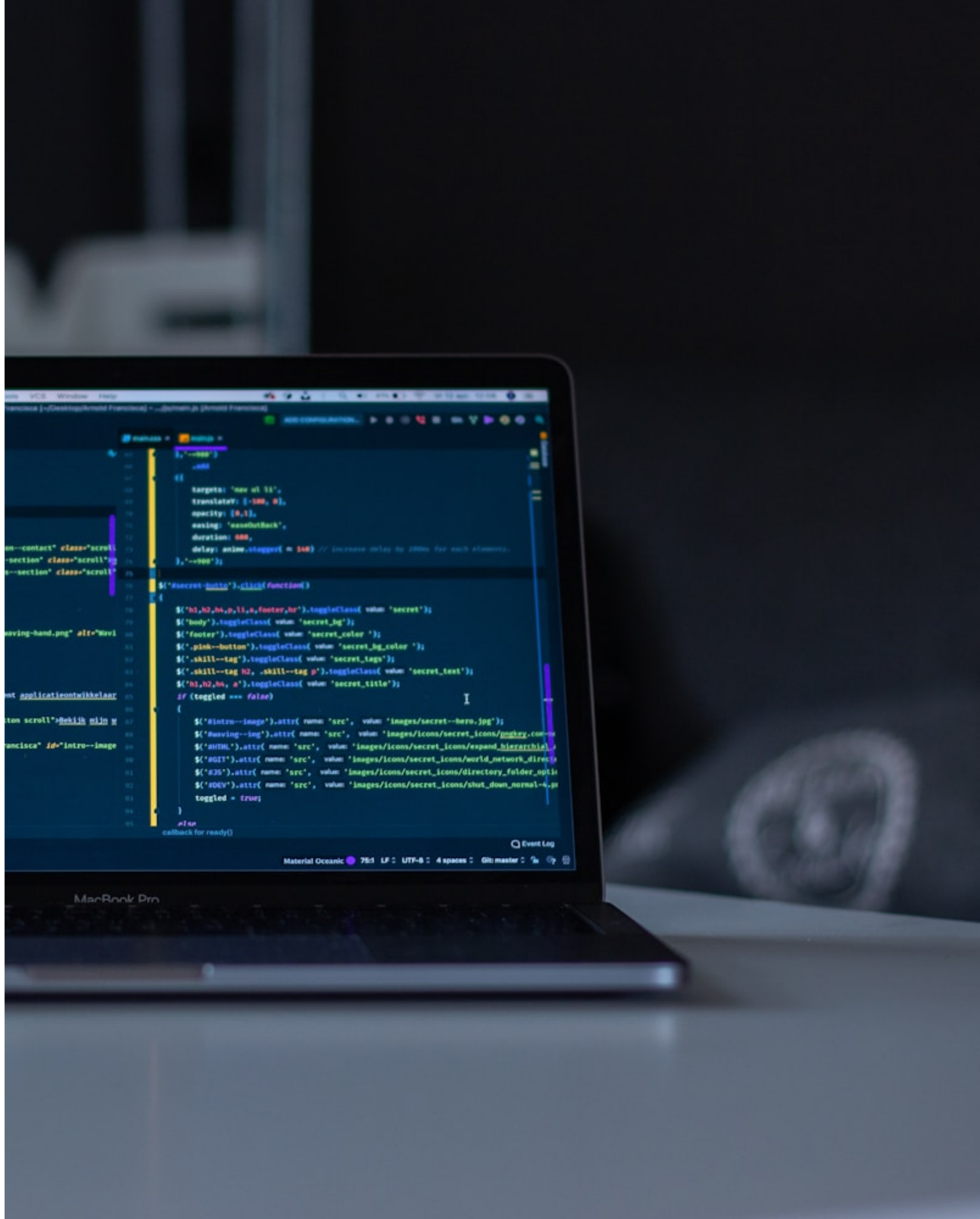
- Monitors reasoning steps and decisions in real time
- Detects violations or risky patterns
- Intervenes before harm is done
- Redirects AI to take compliant, acceptable actions

Just like traction control in a car, it doesn’t wait for the crash—it keeps the AI on track as it moves.



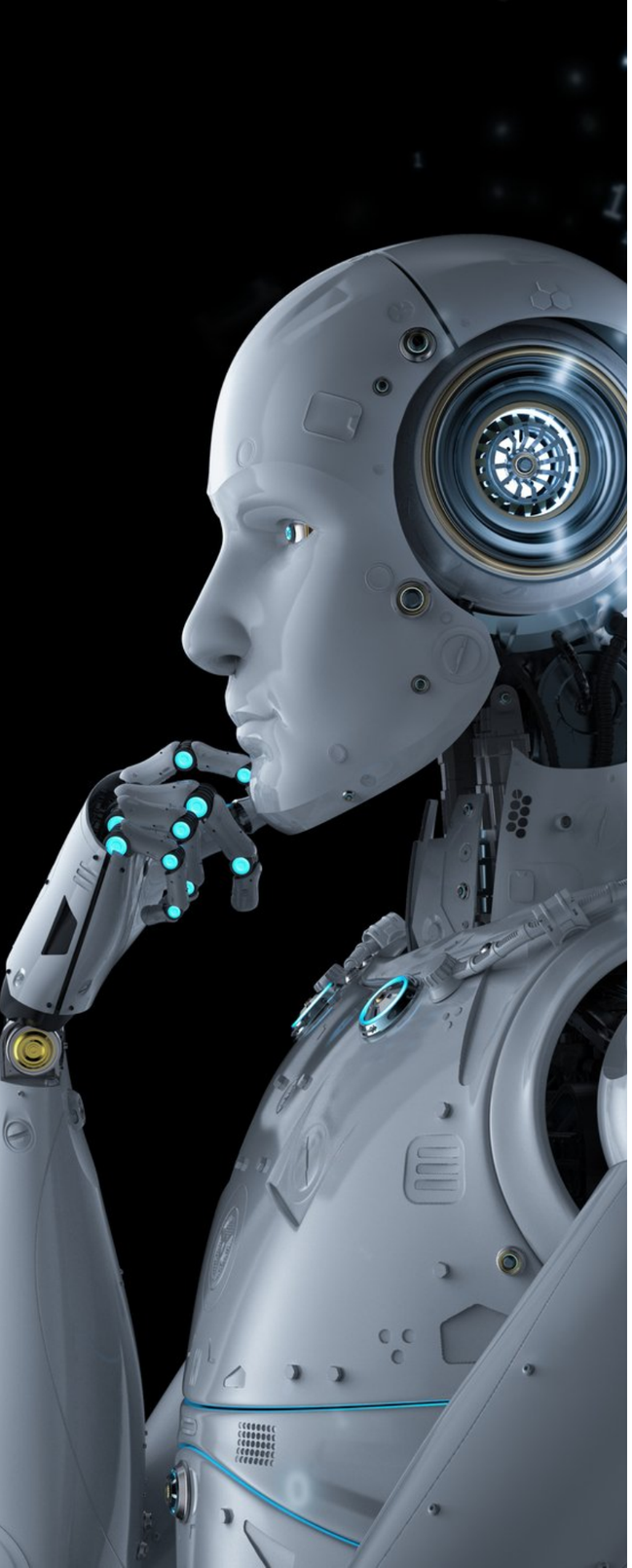
What it Does

- Automatically updates AI policies when rules change
- Flags, explains, and corrects risky decisions—before they’re made public or executed
- Adapts without retraining models or modifying underlying workflows
- Works with any AI stack—LLM-based agents, scripts, or autonomous systems
- Helps companies evolve their AI governance to operate safely in real-time environments



How it Works

- **Dual-Phase Evaluation.** Every reasoning step and final output is scored against configurable policies (safety, bias, legality, etc.).
- **Modular Inhibitor.** A lightweight function embedded directly in the reasoning loop—blocking or redirecting outputs when needed.
- **Dynamic Feedback Loop.** Violations trigger corrective prompts during the AI's reasoning cycle—not after the fact.
- **Final Output Filter.** No decision is final until it passes post-checks. Failing responses are replaced or blocked.
- **Plug-and-Play.** Runs in JavaScript, Python, or edge environments—no model retraining or system overhaul required.



Meet Data — The Inhibitor Data Scientist

Data is a **custom AI teammate at appliedAIstudio**, built to stress-test, validate, and demonstrate the Inhibitor system.

- Data’s creates realistic agent scenarios,
- runs them through the Inhibitor,
- and generates Inhibitor Proofs

Cutting AI Errors in Healthcare Operations

Case Study

Our client uses agents to process insurance claims and remittance documents. The inhibitor flags risky fields with confidence scores and explanations.

This cut review time, reduced errors.

The Business Impact

- 68% reduction in review time → faster processing, lower labor costs
- 83% fewer critical errors → fewer compliance issues and rework
- 53% more fields fully auditable → increased trust and transparency

Engineering a Conscience: The Inhibitor Lab

github.com/appliedaistudio/inhibitor-lab

Inhibitor Lab is our open-source sandbox for experimenting with real-time oversight, and responsible decision-making at the core of AI systems.

What You'll Find

- Live agent examples
- Benchmarks and performance data
- Technical white papers
- Full API documentation

Explore the code, test live agents, and start building responsibly—at inhibitor-lab