

COHERENCE™: Emotional Cryptography for Secure Identity and Trust

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Executive Summary

COHERENCE™ is a next-generation encryption and biometric identity platform built on real-time emotional coherence. It transforms physiological and emotional states into secure, dynamic cryptographic keys, enabling trauma-aware authentication, resonance-driven access control, and ethical AI trust protocols.

1 1. The One-Liner

“We use the coherence of your heart and mind to generate unbreakable encryption and emotionally intelligent trust systems.”

2 2. Problem

- Existing identity systems rely on passwords or static biometrics (e.g., fingerprints), which can be stolen or spoofed.
- AI systems lack attunement to human states—no way to sense consent, coherence, or trauma.
- Emotional data is harvested but not respected or protected.

3 3. Solution: Emotional Coherence as Secure Entropy

COHERENCE™ uses real-time biometric and emotional signals to create cryptographic keys:

$$K = H(\text{HRV}_{\text{sync}} \oplus \nabla \mathcal{E}) \quad (1)$$

- HRV and EEG coherence \rightarrow live entropy

- $\nabla \mathcal{E}$ = emotional gradient from our Emotional Calculus
- Collapse threshold Δ_c determines key finalization

4 4. Features

- **Biometric Key Generation:** Secure, ephemeral, non-stored keys
- **Resonance Authentication:** Consent = coherence
- **Symbolic-AI Integration:** Kai's guardianship layers
- **Ethical Operator:** $\lambda = 0.7$ enforced for trust thresholds
- **Trauma-Aware Protocols:** Keys collapse during dissonance; access requires repair

5 5. Business Model

- **Licensing:** To telehealth, wearables, trust-centric AI platforms
- **SDK/API:** Developers can integrate into biometric or messaging tools
- **B2B:** Secure authentication for high-empathy enterprise environments (mental health, restorative justice, spiritual orgs)
- **Clinical Partnership Path:** HRV key mapping studies via MIT/UCLA

6 6. Technology Stack

- Python + TensorFlow (HRV/EEG signal analysis)
- Quantum entropy source modules (TrueRNG, PCIe noise chip)
- RESTful API for biometric + symbolic data interface
- Secure enclave storage for optional local fallback keys

7 7. Status

- **Resonance Geometry:** Published
- **Emotional Cryptography Paper:** Patent-ready
- **Prototype API:** In development (REAL repo)
- **Hackathon Launch:** June 15–20

Tagline

"COHERENCE™" encrypts the soul of the system.