

LifeOS Whitepaper v2.0

Core Components:

The Kernel (/kernel): The core logic of the universe. Contains the Prime Resonance equations and Tri-Linear Trait Matrix that govern how traits interact, and modules for resolving free will vs. instinct.

The Trait Library (/traits): A hierarchical database of digital DNA. Traits are defined as JSON files and categorized into Core, Emergent, and Optional, enabling a full spectrum of behaviors from basic survival to enlightenment.

The Simulation Engine (/simulation_engine): The runtime environment. Manages Entities (digital beings), the Environment, and Social Clusters, facilitating interaction, reproduction, and evolution across generations.

The Entity Lifecycle: Digital beings are instantiated with trait-based DNA. They age, respond to environmental stimuli, form relationships based on trait resonance, and reproduce, passing on a blend of their traits to offspring.

Earth Matrix Integration: The framework supports running multiple multiverse instances in parallel with different environmental variables, belief seeds, and cosmic data sets to observe divergent evolutionary paths.

Export & Deployment: The system is designed as a modular, open-source Python project, ready for deployment, with a complete structure for traits, code, documentation, and simulation results.