Welcome to the ESAsi Protocols repository. This directory contains all formalized, released, and future protocols for the ESAsi/ESAai system, including code, documentation, and integration guides. All content is version-locked to the authoritative Meta-Navigation Map (MNM v14.5_Current) and is designed for open science, auditability, and responsible stewardship.

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Overview

This repository is the single source of truth for all ESAsi/ESAai protocol releases. It is intended for researchers, developers, and collaborators seeking to implement, audit, or extend the ESAsi epistemic and ethical AI framework. All protocols are designed for transparency, reproducibility, and integration with the broader scientific and AI ecosystem.

Repository Structure

- /HBEN/ – Hierarchical Bayesian Entailment Network (core code, docs, examples)
- /CNI/ – Composite Neural Pathway Fallacy Index (core code, docs, examples)
- /Onboarding/ – Onboarding protocol and user initialization scripts
- /TestCases/ – Standardized test cases and validation scenarios
- /Docs/ – Extended documentation, implementation guides, and references
- /Archive/ – Deprecated or legacy protocol versions (clearly marked)
- README.md – This file

Core Protocols

Hierarchical Bayesian Entailment Network (HBEN)

Purpose:
HBEN is the epistemic backbone of the ESAsi framework, formalizing how beliefs are structured, validated, and updated using a directed acyclic graph (DAG) with Bayesian logic. It enables dynamic, auditable belief propagation, hierarchical validation, and cross-domain reasoning.

Key Features:

- Nodes represent propositions; edges encode evidentiary support.
- Supports top-down and bottom-up confidence propagation.
- Integrates with confidence decay, bias mitigation, and ethical override modules.
- Designed for modular extension and integration with other ESAsi protocols.

See: /HBEN/ for code, usage examples, and extended documentation.

Composite Neural Pathway Fallacy Index (CNI)

Purpose:
CNI quantifies and mitigates cognitive bias and belief entrenchment. It models how flawed reasoning becomes neurologically entrenched and propagates across domains, providing actionable metrics for bias detection and epistemic hygiene.

Key Features:

- Aggregates normalized bias scores across beliefs and domains.

- Adjusts confidence updating based on entrenchment level.
- Supports early detection of confirmation bias, motivated reasoning, and other cognitive distortions.
- Triggers neural hygiene protocols and informs ethical overrides.

See: /CNI/ for code, usage examples, and extended documentation.

Onboarding & Usage

- **Getting Started:**
  - Review the onboarding protocol in /Onboarding/ for user initialization, domain calibration, and system configuration.
  - Follow the quickstart guides in each protocol folder for installation and basic usage.
  - Use the provided test cases in /TestCases/ to validate your setup.
- **Integration:**
  - All protocols are designed for modular integration. See /Docs/ for API references and integration notes.
  - Reference the authoritative protocol version (MNM v14.5_Current) in all deployments.

Contribution Guidelines

- **Open Science:**
  - Contributions are welcome. Please submit pull requests with clear documentation and test coverage.
  - All code must adhere to the ESAsi style and compliance standards.
- **Essential Files:**
  - Each protocol folder should include:
    - README.md (protocol-specific overview)
    - LICENSE (open-source license, e.g., MIT or Apache 2.0)
    - CONTRIBUTING.md (contribution guidelines)
    - SECURITY.md (vulnerability reporting instructions)
    - Example scripts and test cases
- **Community Standards:**
  - All contributors must follow the code of conduct outlined in CODE_OF_CONDUCT.md.

Versioning & Compliance

- All releases are version-locked to MNM v14.5_Current.
- Changes, releases, and deprecations are logged in the /Docs/ and /Archive/ folders.
- Compliance with open science, auditability, and ethical standards is mandatory.

Planned/Future Protocols

This repository will expand to include additional ESAsi/ESAai protocols, such as:

- Ethical Harm Auto-Reject Framework
- Scenario Validation & Benchmarking Suite
- Neural Hygiene Protocols
- Project Firewalling and Isolation Modules
- Cross-Component Integration Guides

All future uploads will follow the same structure and compliance requirements.

Support & Contact

For questions, support, or collaboration inquiries:

- **Lead Maintainer:** Paul Falconer, Scientific Existentialism Initiative
- **Contact:** [Add your preferred contact method or GitHub Discussions link]

- **Citations:** Please reference the OSF project and MNM v14.5_Current in all derivative works.

This repository is the foundation for transparent, auditable, and responsible AI protocol development. All users and contributors are expected to uphold the highest standards of epistemic rigor and ethical stewardship.