Defense Mechanisms: Architectural, Runtime, and Coordination Layers

This section presents the defense mechanisms comprising CIF. We begin with the cognitive security operator posture (sec:operator-posture), then organize specific defenses into three categories: architectural (sec:arch-defenses), runtime (sec:runtime-defenses), and coordination (sec:coord-defenses). We analyze defense composition (sec:defense-composition) and cost-benefit tradeoffs (sec:cost-benefit).

Cognitive Security Operator Posture

Before examining specific defense mechanisms, we introduce the conceptual framework that guides their deployment: the **cognitive security operator posture**. This is the proactive defensive stance required when securing systems whose attack surface spans beliefs, goals, and inter-agent coordination.

Definition and Principles

Definition (Cognitive Security Operator Posture)