

Federated Skill Training

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What It Specifies

Federated training carries: participating participants, contributed observations, training authority, resulting adaptations, and signatures from all contributing participants. The resulting adaptations admit across all participants.

Federation is governance-credentialed. The federation authority, the participant contributions, and the resulting adaptations all enter lineage; downstream operations admit against the federated chain.

Why It Matters Structurally

Centralized training produces structural problems: data centralization (privacy, regulatory burden), single training authority (capture risk), data-locality constraints (cross-jurisdiction friction).

Federated training produces structural decomposition. Each participant retains its observations; federation produces shared adaptations; the resulting operation respects data locality.

How It Composes With Mesh Operation

The architecture defines the federation protocol, the contribution-credentialing format, and the resulting-adaptation distribution. Implementations apply the architecture; federated training operates within the framework.

Federation composes with other features. Cross-jurisdictional federation, byzantine-robust federated training under disputed contributions, and dispute mechanism for federation disputes all build on the federation primitive.

What This Enables

Cross-organization adaptation training, cross-jurisdiction adaptation training, and coalition adaptation training all gain structurally-supported federation.

The architecture also supports federation evolution. As federated-learning techniques mature, federation protocols update through governance procedures.