

Compression Is Not Evidence

Semantic compression, retrieval projection, transformation ethics, uncertainty exposure, and evidentiary boundaries for AI systems.

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FRONT MATTER

Abstract

A Bluehand position paper asserting that summaries, embeddings, clusters, and retrieval projections are semantic transformations, not evidence. Valid use requires lineage, uncertainty, and declared authority boundaries.

Provenance

Source: research/registry.json. HTML route /research/compression-is-not-evidence/ remains the canonical indexed surface.

Compile receipt

Generated at 2026-06-13T02:11:50Z by scripts/pdf/generate_encodings.py (engine=reportlab; depth=published_reportlab_projection_v2).

Publication note

Portable PDF encoding of /research/compression-is-not-evidence/. HTML is canonical; this file supports sharing, review, archive, and stakeholder packets.

DOCUMENT BODY

Purpose

Provide a clear public doctrine for how Bluehand thinks about summaries, embeddings, clusters, retrieval hits, and derived context.

Problem addressed

AI systems often turn compressed representations into confident claims, causing semantic loss, source erasure, and false evidentiary authority.

Why now

AI systems are moving from isolated chat interactions toward persistent agents, retrieval systems, personal workflows, and institution-facing automation.

Inspiration

Bluehand/SigMem0 semantic governance principle that compression, retrieval, embedding similarity, summary, and clustering are not evidence without context and authority.

Vision direction

Derived meaning remains visible, contestable, and bounded rather than silently promoted to truth.

Reader takeaway

Bluehand treats semantic transformation as a serious governance problem.

Operational thesis

Compression is a transformation, not proof. A summary, embedding, cluster, or retrieved passage may be useful, but usefulness is not evidentiary authority. Bluehand treats semantic compression as an ethical and technical act that must expose preservation, loss, uncertainty, and lineage.

Why it matters

AI systems increasingly use compressed context to make decisions. Without declared boundaries, compressed representations can silently overwrite source complexity and convert convenience into false confidence.

Governance boundary

This artifact is intentionally canonical as a stance, but that does not make any derived summary or retrieval result automatically authoritative. It strengthens the rule: compressed objects need lineage before they can support claims.

Recruiter relevance

Provides a capability signal for AI infrastructure, governance, semantic systems, agentic workflow, or local-first execution roles.

Grant relevance

Supports public-interest framing where responsible AI, trustworthy infrastructure, human-centered systems, or research-to-venture pathways matter.

Partner relevance

Helps potential partners understand the problem Bluehand is orienting around and where collaboration could fit.

Technical reviewer relevance

Surfaces the relevant problem, methods, constraints, failure modes, and implementation boundaries without requiring internal Bluehand context.

Maturity note

Published PDF and canonical doctrine/position artifact; publication status is canonical, while implementation claims remain separate.

Uncertainty boundaries

Summaries, embeddings, retrieval projections, and rendered pages are not evidentiary authority without declared lineage to source artifacts. Implementation claims require separate evidence.

Public claims

- Bluehand treats compressed semantic objects as transformations, not evidence.

Uncertain claims

- The exact enforcement mechanism depends on implementation context.

Implementation boundary

This is a public Research Object. Implementation evidence, strict lineage, and runtime proof belong in project/repo-specific surfaces unless explicitly linked.

Publication doctrine

The PDF is the shareable artifact, but the HTML route is the authority surface. It gives crawlers context, gives recruiters a readable summary, and gives Bluehand a stable research landing page that can rank for the work rather than the file format.

Source registry

Canonical registry object: research/registry.json (BH-RL-2026-0007). Public discovery:
<https://www.blue-hand.org/research/registry.public.json>

Lineage

```
id=BH-RL-2026-0007; source=research/registry.json; route=/research/compression-is-not-evidence/;
engine=reportlab; generated_by=scripts/pdf/generate_encodings.py;
pdf_depth_status=published_reportlab_projection_v2
```

Do not infer

- Do not infer that every summary is invalid; the claim is that summaries require scoped authority.