Zain Dana Harper

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AI Evaluation, Accountability, Research Synthesis & Verification Lead

30-Second Work-Sample Proof Strip

- **95.83% (p=4e-6):** JFC3P-7B adversarial trap rejection
- **115/115 (0 FP):** Three-Plate planted-defect oracle
- **30 Studies (12 Nulls):** 13 Zenodo DOIs; open reproductions
- **harperz9.github.io:** Live proofs, receipts & 41 merged PRs

Executive Profile

Independent AI evaluation researcher, verification architect, and multi-agent research director focused on separating genuine capability from benchmark theater. Built Flywheel 2.0.0 and the Three-Plate verification oracle (115/115 planted-defect recall, 0 false accepts), directed and trained JFC3P-7B-Oracle-v1 (95.83% adversarial trap rejection, +33.33 pp, p = 4e-6), and published 30 empirical studies across 13 fields including 12 explicit null results and 13 Zenodo DOIs. Direct, work-sample-driven collaborator with 41 merged upstream PRs across 34 repositories.

Core Capabilities & Skills

AI Evaluation & Governance: Fail-Closed Verification Oracles, Planted-Fault Controls, Adversarial Trap Suites, Steered-Agent Tool Guards, Preregistered Ablations, Honest Null Publication, Incident Investigations

Research Direction & Synthesis: Directing Multi-Agent Research Pipelines, Cross-Domain Synthesis (Ecology, Ethics, Behavior, Optics, AI), Technical Writing & Clear Analogical Communication, Inspect Bridge

Verification & Corpus Infra: SHA-256 engine-receipt/1 Audit Ledgers, CMMNS Provenance (1,735 tests), Articulate Prose Linting (2,096 tests), Multimodal Corpus Indexing (14.45M files / 3.66 ms FTS5), Python, SQL

AI Evaluation, Research Direction & Accountability

Founder & Independent AI Evaluation / Research Director | Harper Research & Open-Source Ecosystem
Seattle, WA | 2025 - Present (Independent R&D since 2013) | github.com/HarperZ9/flywheel | harperz9.github.io/findings/

- **Three-Plate Verification Oracle, Rowan Router & Flywheel 2.0.0:** Designed a fail-closed 30-package verification platform with cryptographic engine-receipt/1 ledgers and the Rowan unified local/subscription/API router (46.73% AVTR-4R token savings, strict offline refusal); Three-Plate caught 115/115 (100%) planted defects with 0 false accepts vs 6.09% single-plate review.
- **Adversarial Trap Oracle & Steered-Agent Guards:** Directed and trained JFC3P-7B-Oracle-v1 (4.68 GB Q4_K_M), lifting deceptive-prompt trap rejection from 16.67% to 95.83% (+33.33 pp, Fisher exact p = 4e-6); built request-vs-action guards catching 64/66 harmful steered tool calls vs 1/66 for schema checks.
- **Empirical Studies, Null Results & Disclosure Research:** Published 30 open empirical studies across 13 fields (13 Zenodo DOIs) and 159 public repositories (including bio-research and crypto-margins), explicitly publishing 12 null results and authoring Who Knew First across nine AI-agent disclosure incidents.
- **Research Synthesis & Provenance Tooling:** Built CMMNS (cross-browser MV3 web provenance and archival platform, 1,735 tests, 91.0% pooled precision across 4 corpora), Articulate 0.19.1 (2,096 tests), a 1.18M-record pure-BuildLang corpus engine (156 ms cold, 86 MB RSS), and a 6.01M-word FTS5 web (3.66 ms lookup).

External Collaboration, Field Leadership & Credentials

41 Merged Pull Requests Across 34 External Repositories (2025 - 2026)
harperz9.github.io/portfolio.html

- **AI Eval & Verification Upstream Patches:** Merged fixes and deterministic test coverage in DeepEval (#2822), AgentFence (#253, #261, #262), Pydantic AI (#6205), Datasette (#2815, #2861), python-grimp/grimp (#303-#305), and Free Law Project (#820).

Tree Care Crew Lead (Legendary Tree, 2015 - 2026) | Credentials & Education

- **Field Leadership & Credentials:** 11 years leading high-hazard tree-care crews and client education; Google DeepMind badges (100/100), 6 Qualys Specialist certs, Cisco Ethical Hacker (100%), 4 Microsoft Applied Skills, BlueDot AGI Strategy; High School Diploma (2013).