

Collapse Aware AI — Preliminary Engineering Evaluation

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This document serves as an early, engineering-level overview of the observed performance behaviour of the Collapse Aware AI (CAAI) architecture. It is designed to be suitable for citation and early peer-reference while protecting proprietary implementation details. All numerical values shown below are **illustrative placeholders** intended to convey format and reporting structure only. They do not represent real benchmark data or internal parameters.

1. System Overview

CAAI introduces a bias-aware interaction framework built on a modular architecture consisting of four interacting layers:

- **Governor:** Supervises system context, policy, and bias routing.
- **Worker:** Executes inference and tool/API calls under Governor control.
- **Memory:** Retains weighted moments, anchors, and historical bias traces.
- **Core Kernel (Crown):** Proprietary closed-form bias engine that calculates adaptive weighting using observer salience and memory gradients.

The architecture produces behaviour that adapts dynamically to user timing, tone, and focus — forming measurable changes in recall weighting and output probabilities.

2. Experimental Setup (Simplified)

Preliminary evaluation involved paired A/B tests against a baseline deterministic conversational model under identical prompts. The system's bias engine was run in *Governed Mode* with memory enabled and salience weighting active. Each run recorded human preference scores, calibration error (ECE), and behavioural diversity across 100 interaction trials.

3. Example Metrics (Illustrative Only)

Metric	Baseline Model	CAAI (Illustrative)	Observed Change
Human Preference (Win Rate %)	50.0	62.0	+12.0
Calibration Error (ECE ↓)	0.083	0.076	-8.4 %
Response Diversity (Unique n)	1,828	5,530	+14.7 %

Metric	Baseline Model	CAAI (Illustrative)	Observed Change
Average Latency (ms)	184	196	+6.5 %
Memory Recall Consistency (R^2)	0.61	0.73	+19.7 %

Note: These figures are representative placeholders for format demonstration purposes only. Actual results will be published following independent replication and license■approved testing under controlled conditions.

4. Discussion (Summary)

The illustrative pattern shows the type of measurable gains that would support CAAI's central claim: that memory■weighted, salience■modulated inference improves human■perceived coherence without degrading response stability. Real testing will measure these same dimensions to determine empirical performance lift. No physics or metaphysical assumptions are required — metrics are standard ML engineering measures (ECE, win■rate, recall correlation).

5. Next Steps

1. Conduct reproducible A/B trials using the finalized UK demo build.
2. Register protocol and results on Zenodo with versioned DOI.
3. Invite third■party researchers to replicate under NDA sandbox.
4. Publish aggregate engineering report (no core code exposure).
5. Integrate approved metrics into website and GitHub documentation.

Disclaimer

All intellectual property, algorithms, and parameterization underlying the Core Kernel remain proprietary to Inappropriate Media Ltd (t/a Collapse Aware AI). This report is released solely for informational and academic indexing purposes and does not constitute disclosure of the underlying source code or mathematical implementation.