BENCHEWS · SCIENTIFIC MONOGRAPH

BenchEWS Studio Web – External-Model Evidence Review

Implementation evidence, reproducibility, and scientific boundary

BOOK-v1.0-6bc75901

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Review date: 30 September 2026.

Review conclusion

No demonstrated release blocker was identified in the available evidence for releasing BenchEWS Studio Web as an experimental scientific instrument while CRTI is explicitly labelled EXPERIMENTAL / UNVALIDATED.

Scientific boundary: This finding does not establish scientific validity or predictive superiority of CRTI.

1 - Evidence identity

- Target reviewed: audit-studio.vonmallinckrodt.com
- Gate Zero: PASS
- Real-data workflow run: 36640686557
- Evidence source commit: fecc0df6da3be282c9b64a6a21693bf062dfe803
- Full evidence artifact SHA-256: 472082bf5cd019e5d53fb51876b8104f197dc4dbba7004dd806810cfeace7c98
- Compact review artifact SHA-256: bbb3767adff34973333b362015ed1a0ec1b99fbd37db6a82a1a67e6d0ed7eb91
- Real-data source: UCI Smartphone-Based Recognition of Human Activities and Postural Transitions, DOI 10.24432/C54G7M.

2 - Review determinations

Area	Determination	Evidence level
Application identity / Gate Zero	PASS	External-model observed
CI real-data execution	PASS	CI executed
Input identity and traceability	PASS	CI verified
CRTI deterministic implementation behaviour	PASS	CI verified
Conventional-module execution	PASS	CI verified
Independent numerical verification by external model	NOT EXECUTED	External tooling limitation
Adversarial boundary testing	PASS	CI verified
Provenance / reproducibility architecture	PASS	Evidence review
Evidence-chain integrity	PASS within supplied CI evidence	Evidence review
Scientific validation of CRTI	NOT ESTABLISHED	Unsupported by this benchmark
Predictive superiority of CRTI	NOT ESTABLISHED	Unsupported by this benchmark

3 - Positive evidence

The CI gate completed successfully with the prescribed 256 x 3 real-data input, repeated CRTI execution and a deterministic scientific-output invariant. The evidence pipeline also executed variance, lag-1 autocorrelation and skewness, generated separate conventional calculations, exercised malformed and unsupported input cases, and produced retained evidence artifacts.

The external-model Gate Zero inspection observed the application, the canonical 12-panel structure, explicit Experimental / Unvalidated CRTI labelling, and the absence of a global BenchEWS score.

4 - Limitation

The external model could not independently unpack and execute the supplied ZIP evidence package in its environment. Independent numerical reproduction by that external model was therefore NOT EXECUTED. This is an external-review tooling limitation and is not evidence of a BenchEWS defect.

CI-verified numerical and adversarial findings must not be relabelled as independently reproduced by the external model.

5 - Release interpretation

The external-model review reported NO demonstrated RELEASE_BLOCKER in the available evidence for release as an experimental scientific instrument with CRTI explicitly labelled EXPERIMENTAL / UNVALIDATED.

This means only that the reviewed implementation evidence did not demonstrate a release-blocking software defect. It does not convert experimental mathematics into validated science.

6 - Scientific boundary

No claim is made that CRTI is a probability, risk score, severity score, transition probability, diagnosis, validated Early Warning predictor, or superior method. No universal CRTI threshold is established by this review.

This review evaluates the available evidence for implementation correctness and reproducibility only. It does not establish scientific validity or predictive superiority of CRTI.