

Calming Index: Methodology Abstract

THE HOUSE OF LITTLE THOUGHTS / CALMING INDEX

Model

Sensory Balance = Sensory Demand – Regulatory Capacity. Calming Index = $\text{clamp}(50 + 0.5 \times (\text{Regulatory Capacity} - \text{Sensory Demand}), 0, 100)$. A balanced baseline maps to 50.

Sensory demand

Visual (0.30), auditory (0.30), temporal (0.20), and cognitive (0.20) demand form the empirically initialized demand weights. Raw measurements are scaled to a 0–100 range before aggregation.

Regulatory capacity

Predictability (0.35), recovery capacity (0.35), and visual harmony (0.30) form the empirically initialized regulatory weights. Recovery considers stillness, quietness, and edit gaps.

Current limitations

The Synthetic Sensory Benchmark v1 primarily contains continuous single-shot generated videos. Cut-heavy naturalistic videos and human validation remain future work. Scores are engineering descriptors and should not be interpreted as pediatric outcomes.

Status

Working summary for discussion. This document is not a peer-reviewed publication.

Scope

The framework is a computational data engineering and media architecture methodology. It does not make medical, diagnostic, psychiatric, or clinical claims regarding pediatric healthcare.

Source and further detail

Open implementation and technical documentation: <https://github.com/pallavikaran/CalmingIndex>