

GARMIN HEALTH INTELLIGENCE



SYSTEM ARCHITECTURE

MISSION PARAMETERS

Probabilistic Engines

LLMs generate plausible text,
not factual truth.

The Hallucination Gap

Raw data + Prompts =
Unreliable outputs.

Deterministic Fix

Validated math constraints
ensure 100% accuracy.

PIPELINE LOGIC

Raw Sensor Data

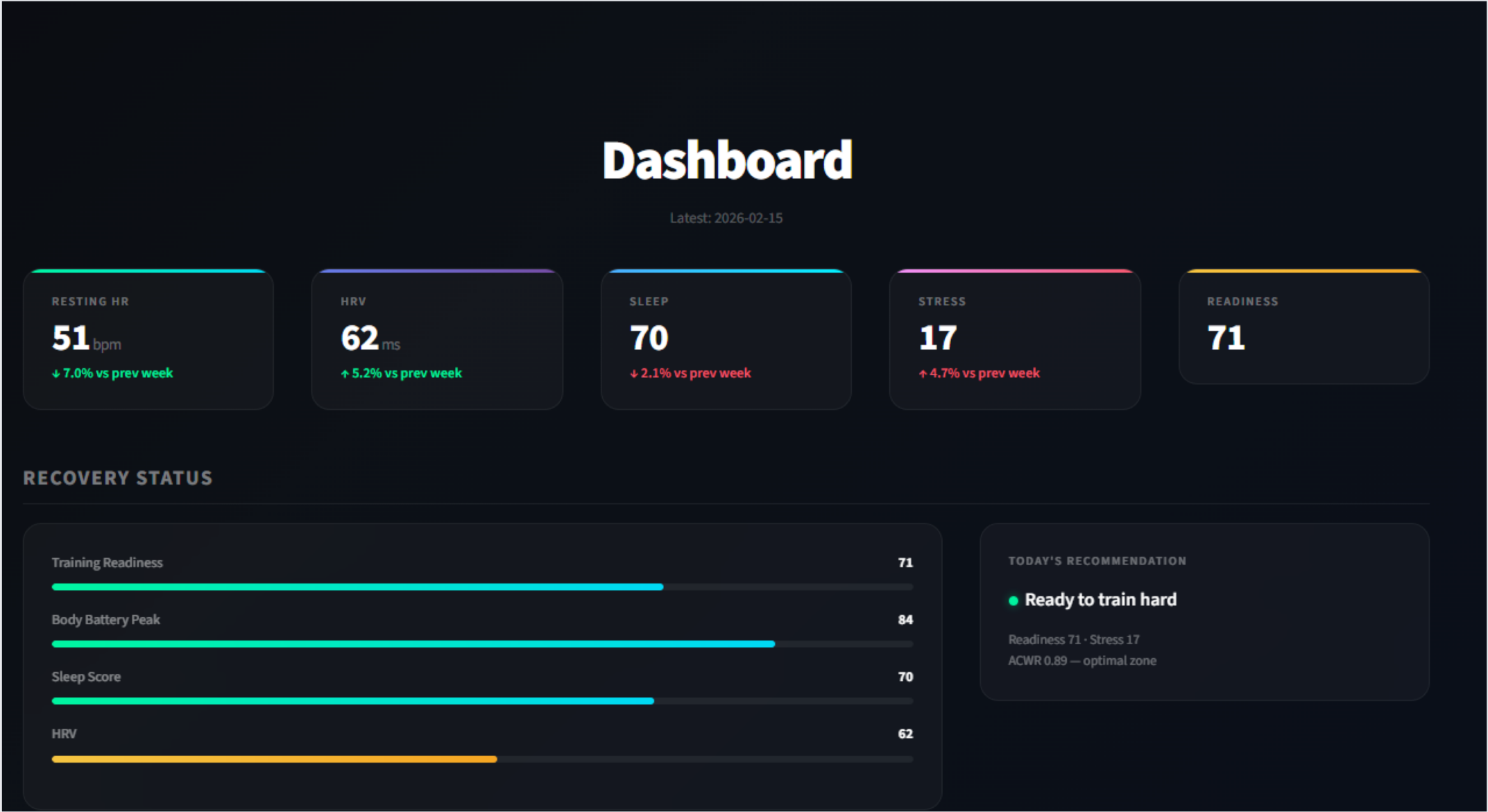


Deterministic Math



Semantic Agents

OPERATIONAL DASHBOARD



CORE LOGIC

Pearson Correlation

Detects linear relationships

Markov Chains

Predicts state transitions

AR(1) Models

Separates trend from noise



MULTI-AGENT SYSTEM

Agent Chat

Talk to 9 specialized AI agents — they have full database access + correlation data

☒ Single Agent (fast) ☐ Multi-Agent (comprehensive)

Single: one analyst answers quickly. Multi: dispatches to relevant specialists who work in parallel, then synthesizes their responses. Slower but deeper.

> Example questions

how does my sleep affect my training ?

⚡ HEALTH ANALYST

Your sleep significantly impacts your training. Specifically, your sleep metrics from the previous day are strong positive predictors of your training acute load for the current day.

* **Training Sleep Score** from yesterday predicts today's **Training Acute Load** with a very strong positive correlation of $r=+0.996$ ($p=0.0003$).

* Your overall **Sleep Score** from yesterday predicts today's **Training Acute Load** with a strong positive correlation of $r=+0.989$ ($p=0.0013$).

* **Training Sleep Percentage** from yesterday predicts today's **Training Acute Load** with a strong positive correlation of $r=+0.976$ ($p=0.0043$).

* **REM Sleep Seconds** from yesterday predicts today's **Training Acute Load** with a strong positive correlation of $r=+0.974$ ($p=0.0052$).

This indicates that better sleep quality and quantity (higher sleep scores, more REM sleep, higher sleep percentage) on one day are highly associated with a greater capacity for training acute load on the following day.

Clear chat

Ask anything about your health data...



SIGNAL ANALYSIS

