Causal Health Agent

From Wearable Sensor Anomalies to Evidence-Grounded Explanations

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UXD User Experience and Interaction Design Lab

NSERC CRSNG

Data Mining

Motivation

Smartwatches can detect unusual changes, but they rarely explain why they happen.

Goal

Provide personalized, causal, and evidence-grounded explanations for wearable health anomalies.

What is it?

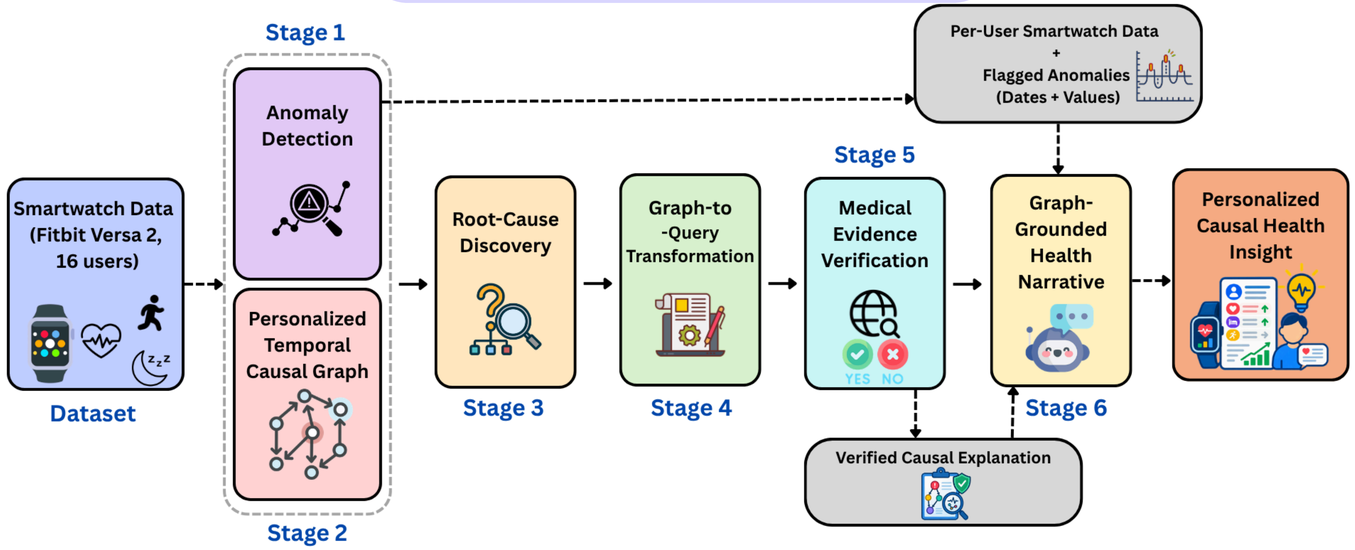
An AI system that:

Detects unusual changes in your data.

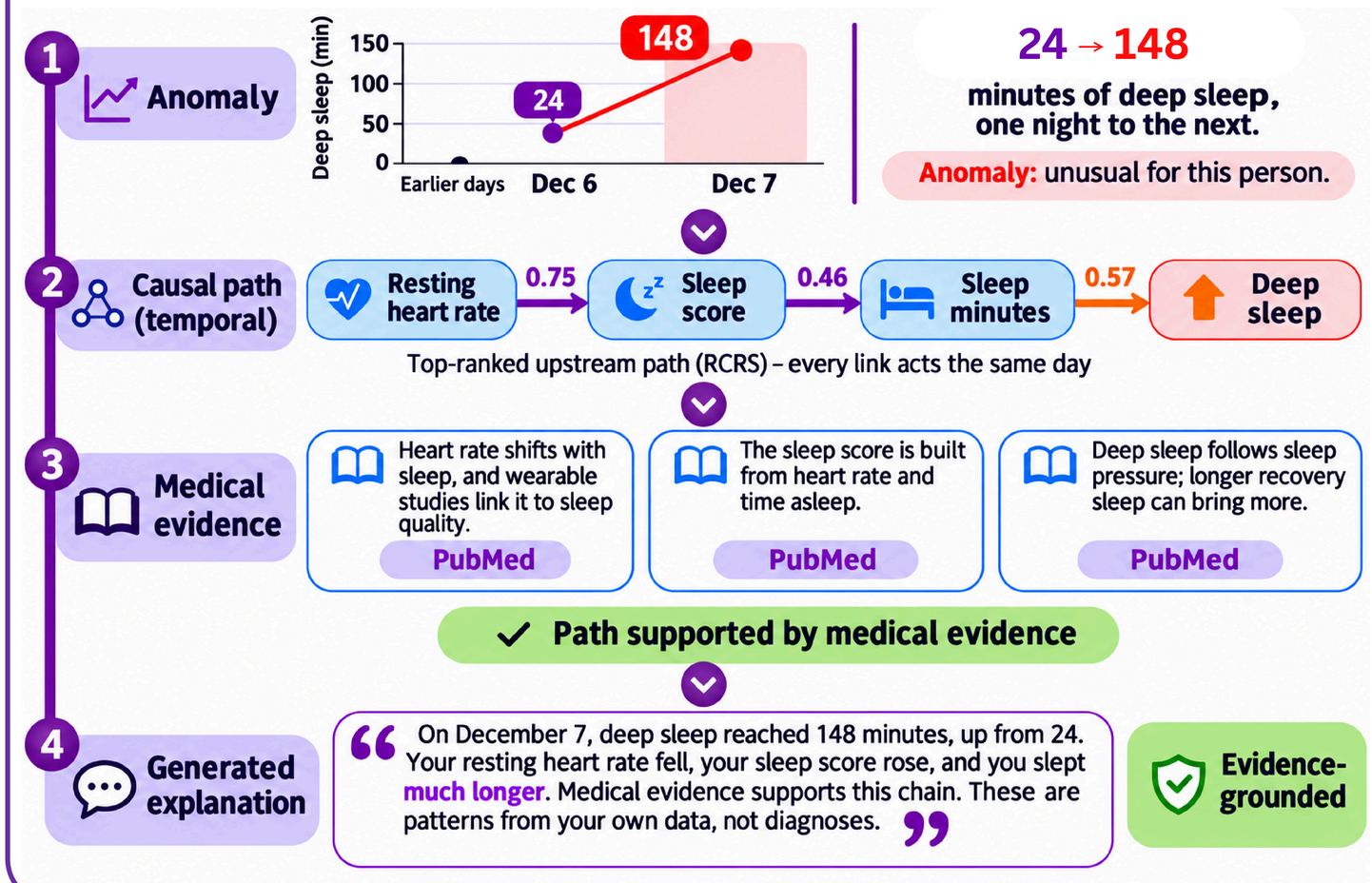
Identifies what may be causing them.

Checks against medical evidence and explains.

System Architecture



How it works? A real example



Contribution

Personalized Analysis. Builds individual temporal causal graphs.

Root-Cause Ranking. Prioritizes potential causes using RCRS.

Evidence Retrieval. Converts causal pathways into medical queries.

Explainable Insights. Generates evidence-grounded health narratives.

Conclusion

Causal Health Agent Helps users better understand potential causes of health changes and make more informed about health decisions.