

Personalized Health Digital Twin

A living, evolving computational model of a person's health, built by a student team, grounded in real clinical science.

PARTNER UNIVERSITY

Virginia Tech, PBL Capstone / Integrated Project Design

TECHNOLOGY PARTNER

Advanced Genomics Research Inc.

STATUS

Research / Design: team kickoff and scoping

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TIMELINE

Fall 2026 (16-week semester); VT PBL Pitch Day

FOCUS AREAS

Healthcare Education · Emerging Technology Readiness

— The challenge

Healthcare decisions often rest on periodic measurements and population averages. But a person's health is dynamic: medications, activity, sleep, diet, stress, hormones and existing conditions interact over time in ways a few checkups a year cannot capture.

— Problem statement

How might we design and prototype a personalized health digital-twin platform that integrates individual health and physiological data to model changes in a person's health over time and explore the potential effects of different behaviors, conditions, or interventions?

— One platform, many health journeys

- Diabetes: glucose, meals, activity and medication
- Cardiovascular health: heart rate, blood pressure and activity
- Menopause: symptoms, sleep, activity and physiological change
- Designed to extend to more conditions and wearable data

Interested in health data, clinical partnerships or piloting the platform? Get in touch.

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