

SANOFI TRACK — AI FOR HEALTH

# PharmaOS Personal

AI-powered personal health console — from drug certification platform to your pocket dermatologist, nutritionist, and wellness companion.

11

Health Modules

40

Skin Conditions

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Backend Required

THE PROBLEM

# Healthcare is **fragmented**, expensive, and reactive

## Today's Reality

- × Skin concern? Wait 3-6 weeks for dermatology
- × No way to tell if a rash is eczema or lupus
- × Drug interactions found after adverse events
- × Health data scattered across 5+ apps
- × Voice input can't understand medical terms

VS

## PharmaOS Personal

- ✓ Instant AI skin analysis from phone camera
- ✓ 40-condition differential diagnosis in seconds
- ✓ Real-time medication interaction checker
- ✓ Single unified health dashboard
- ✓ Voice input with medical NLP parsing

THE SOLUTION

# One platform. Every health need.



## AI Skin Analysis

Live camera → pixel-level feature extraction → 40-condition differential diagnosis



## Medication Interactions

Real-time drug-drug and drug-food interaction checking with severity grading



## Voice Health Profile

Speak naturally → NLP parses conditions, meds, allergies + BMI validation



## Food Scanner

Capture food images for nutritional analysis, allergen flagging, meal tracking



## Sleep & Activity

Track sleep patterns and daily activity with Chart.js trend visualizations



## Mental Wellness

PHQ-2 & GAD-2 validated screening tools for depression and anxiety

# AI Skin Analysis — How It Works

## Extracted Image Features

### COLOR CHANNELS

Redness · Brownness ·  
Purpleness · Whiteness ·  
Yellowness

### TEXTURE

Sobel edge detection →  
rough/scaly vs smooth

### SYMMETRY

Bilateral L-R pixel comparison

### BORDERS

Sharp (defined) vs Diffuse  
(blended)

### SPREAD

Focal lesion vs widespread rash

### COLOR VARIANCE

Uniform vs heterogeneous

## Analysis Pipeline

- 1 Capture image via camera or upload
- 2 Downsample to 250px, extract 10 feature axes
- 3 Score against 40 condition visual profiles
- 4 Return top-5 differential with confidence %
- 5 Classify severity: Urgent → Benign

### Condition Categories

Inflammatory · Autoimmune · Fungal · Bacterial · Viral · Allergic ·  
Acneiform · Vascular · Pigmented · Parasitic

# Built for the **Sanofi AI for Health** track

## Problem & Insight

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Healthcare access inequality is real and urgent. 2B+ people lack derm access. A phone camera + pixel math closes the gap.

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## Solution & Value Prop

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Single HTML — zero backend, zero APIs, works offline. 11 modules, real image analysis, not random outputs.

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## Market Opportunity

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\$15.1B digital health market by 2030. Target: underserved populations, telemedicine pre-screening.

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## Execution & Feasibility

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Fully working product — real browser APIs: getUserMedia, Web Speech, Canvas 2D. Not a mockup.

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## Product & Execution Quality

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20

8,000+ lines, single-file architecture. Real computer vision (Sobel edge detection, HSL classification, bilateral symmetry). NLP voice parsing with 113 known medical terms. WHO/CDC growth chart validation. 40-condition dermatological database. Live camera. Not a slide deck — a shipped product.

LIVE DEMO AVAILABLE

# Your phone is the **first point of care**

PharmaOS Personal turns every smartphone into an AI health screening tool — no downloads, no accounts, no backend. Just open the HTML and start.

