



# AI-Powered Care Intelligence Platform for Diabetes Reversal

# Overview

Revival365 AI, a digital health initiative, set out to revolutionize Type-2 diabetes management and reversal by combining AI-driven insights, IoT devices, Protocol, Food logs and personalized human coaching. The goal was to move from reactive care to proactive, predictive intervention improving patient outcomes while reducing care delivery costs.

## Business Challenge

Traditional diabetes management relied on periodic doctor visits and manual data logging, leading to fragmented insights and delayed intervention. The major pain points included:

Limited visibility into real-time patient health data (glucose, stress, sleep, BP, activity).

Low patient adherence to lifestyle recommendations due to lack of engagement.

Manual data collection from multiple disconnected devices and apps.

Delayed clinical decisions due to absence of continuous monitoring.

Difficulty in scaling personalized coaching across thousands of patients.

## Objective



Build a connected health ecosystem integrating CGM, wearables, and mobile apps.



Use AI and predictive analytics to generate real-time, actionable insights.



Improve patient adherence and engagement through conversational AI.



Enable doctors and health coaches with automated dashboards and progress tracking.



Achieve measurable reductions in glucose variability and medication dependency.

## Solution Approach

### 1. Discovery & Data Strategy

Conducted workshops with doctors, dietitians, and patients to define data flows and success metrics. Mapped device integration requirements (Linx, Tracky CGM, JC Wear Band).

### 2. AI-Driven Analytics Layer

Implemented machine learning models to predict glycemic trends, detect anomalies, and trigger personalized alerts.

Built personalized AI profiles that adapt to each patient's lifestyle, diet, and activity mapping to food log and protocols.



### 3. Conversational Health Assistant

- Developed an AI assistant that engages patients daily through Chat Application Integrated to Revival365 mobile app.
- Integrated Retrieval-Augmented Generation (RAG) to reference clinical knowledge bases and patient-specific data, ensuring contextual, accurate responses Via MCP Tools.
- Enabled the assistant to answer health questions, provide reminders, and share motivational insights reducing the burden on care teams.
- AI-powered image-based calorie calculator that estimates calorie intake by analysing food photos taken before meals. The system combines computer vision, deep learning, and nutritional science to deliver accurate calorie and macro nutrient estimations helping users monitor diet adherence effortlessly and improve lifestyle management for conditions like Type-2 diabetes, obesity, and hypertension.

### 4. Unified Platform & Dashboard

- Created a cloud-based platform aggregating data from wearables, food logs, and health records.
- Designed clinician dashboards for trend visualization, compliance tracking, and patient prioritization.
- Automated alerts for at-risk individuals needing immediate intervention.

### Technical Highlights

- **Architecture:** Microservices-based, cloud-native setup with secure API integration.
- **Data Sources:** Linx, JC Wear and manual logs.
- **AI Models:**
  - Predictive models for glucose forecasting and anomaly detection.
  - RAG-enabled chatbot fine-tuned on healthcare ontology.
  - Image models for calorie calculator.
- **Infrastructure:** Deployed on AWS Services with compliance.
- **Security:** Role-based access application access.

## Results & Impact

38% reduction in average fasting glucose within 3 months.

2.4× improvement in patient adherence and engagement.

70% reduction in manual data entry workload for clinicians.

Real-time visibility enabled faster intervention for at-risk patients.

Scalable architecture supporting over 25,000 patients without performance degradation.

High satisfaction rate (92%) among enrolled patients and health coaches.

## Key Takeaway

By integrating AI, IoT, and RAG based conversational intelligence, Revival365 AI built a proactive and scalable health management ecosystem that transforms chronic disease care into a data-driven, personalized, and engaging experience.

This case demonstrates how technology can shift healthcare from treatment to empowerment and prevention, delivering measurable impact at scale.