RISHABH SOFTWARE

Case Study

Next-Gen Machine Learning Driven Health Monitoring System

For a UK-based medical service provider to improve clinical efficiency and patient care

PROJECT OVERVIEW

Creation of a system that offers real-time human activity recognition within the clinical systems to provide better diagnosis & treatment for critical care patients

Capability	Industry	Country
Analytics	Healthcare	UK

KEY FEATURES

The ML-based activity & health monitoring solution offers actionable insights to help collate the recorded data (historical & current health data sets) from various connected devices along with the patient's vitals.

Data collection

Readings are collected from various sources, including historical records, prescription, wearable patient sensors, and even equipment such as arterial blood gas (ABS) analyzer, echocardiography, and more

Improved efficiency

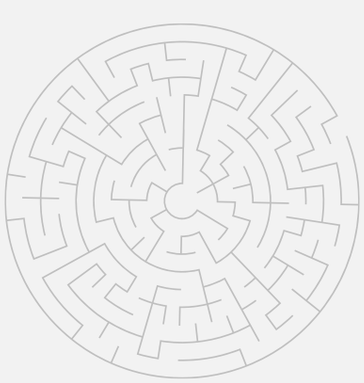
The simplified process helps convert varied data sets across different device protocols in a unified format for further analysis, reporting, diagnosis and, sometimes, treatment

Centralized health management

The AI-powered health monitoring system offers real-time insights and alerts about health & performance, ensuring instant data interaction with actionable outputs

Continuous monitoring

The system classifies the activities performed & recorded by different patients in a continuous sequence – while they are sleeping, sitting, being fed, walking, and more



CHALLENGES

- No system in place to understand diverse device criticality and functionality
- Manual & time-consuming to do analysis of historical & current data of the patients
- No way to understand, diagnose and project next steps in patient-care in faster way
- Need to offer real-time assistance for critical care patients

SOLUTION

W e created ML-based data models for the connected devices to enable activity recognition through a secure, reliable health monitoring system. The model enables the medical care provider to record & analyze large data sets of patient health in real-time to make informed decisions.

Data set & deployment

The data set was divided into observation cycle windows of one second with a 50% overlap and further deployed into the AI system at scale on users' devices

Smart data model

The model extracts the data for the mapping & analysis of the patient's health status through connected devices, including a heart rate sensor, VO2, ECG, and more

Unified dashboard

The customized interface helps incorporate metrics beyond traditional activity identification models, and creates dashboard based on various parameters such as gender, age, illness, treatment group, and more

Predictive analysis

It enables doctors to easily track & identify patterns of multiple patient activities and define an accurate, pre-emptive diagnosis of ailments

TECHNOLOGIES & TOOLS

Outcomes

5X
increase in operational efficiency

63%
accurate diagnosis through ML models

Real-time
data collection & patient-intelligence

ABOUT RISHABH SOFTWARE

As a Digital Engineering and Enterprise Transformation leader, we empower businesses to scale, innovate, and thrive in today's digital-first world through technology rooted in trust and transparency. We leverage emerging capabilities such as Cloud, Data Engineering & Analytics, AI, Automation and Application Engineering to drive digital transformation and unlock new opportunities. We have successfully served across 25+ countries, and we work towards customer delight as "WE CARE."

sales@rishabhsoft.com
+1-877-747-4224