# TAILWINDS™

## THE UI FOR AI

BUILT ON ⚙ **Amazon Bedrock**

POWERED BY 🌐 **IBM watsonx Assistant**

# ✦healthmetryx

Healthmetryx is a pioneering health technology company that leverages Internet of Things (IoT) devices to facilitate early detection and prevention of diseases. At the heart of their offering is the Clarinet, an IoT-enabled wearable device designed to measure critical health parameters such as oxygen levels, $CO_2$, spirometry, and pulse oximetry. By combining this sensor data with user-provided demographic information, aims to provide comprehensive health reports and detect anomalies.

## BUSINESS OBJECTIVES

Healthmetryx aimed to achieve the following objectives:

**1** **Early disease detection:**
Leveraging IoT devices and advanced analytics for early detection of potential health issues.

**2** **Health monitoring:**
Providing continuous and accurate monitoring of health metrics.

**3** **Enhanced reporting:**
Delivering detailed health reports + detecting anomalies through sophisticated data analysis.

**4** **A user-friendly interface:**
Easy access and understanding of health data for individuals and healthcare professionals.

The motivation behind these objectives was to provide comprehensive health insights, improve anomaly detection, and enhance user engagement with intuitive interfaces.

## THE CHALLENGE

Healthmetryx faced significant challenges in integrating and analyzing vast amounts of health data from the Clarinet device. These challenges included:

- ✓ **Data management:** Efficiently storing and processing large volumes of sensor and demographic data.

- ✓ **Complex analytics:** Developing advanced analytics to interpret health metrics and identify anomalies.

- ✓ **User accessibility:** Creating intuitive and insightful dashboards for end users.

- ✓ **Integration with AI:** Seamlessly incorporating AI for deeper data analysis and user interaction.

## THE SOLUTION

In partnership with Innovative Solutions, Healthmetryx implemented a comprehensive approach to address their challenges, focusing on efficient data management, advanced analytics, and enhanced user interaction.

**AI Integration:** For this approach, Innovative utilized IBM watsonx Assistant, a conversational AI chatbot, allowing users to ask natural language questions via the Healthmetryx dashboard. This AI integration also gives users the ability to conduct comparative analysis, allowing for more in-depth health assessments. Anthropic Claude's Haiku Model is used to translate the questions a user inputs into queries. These queries are then processed by Amazon Athena to ensure users receive accurate and relevant data in response to their questions. Innovative also implemented scoring logic using GenAI technology that enables users to easily decipher the health metrics they receive based on color-coded ranges, which then provides them with a personalized health score.

**Integrated Data Management and Analytics:** Innovative Solutions streamlined the data storage and processing by leveraging a cloud-based architecture powered by Amazon Bedrock. This enabled Healthmetryx to securely store and transform vast amounts of sensor and demographic data, ensuring that it was ready for sophisticated analysis. By incorporating generative AI, Healthmetryx could categorize and classify health metrics, providing insights and anomaly detection.

**Enhanced User Interaction:** To ensure user-friendly access and interpretation of health data, the solution included a QuickSight integration. This integration automatically pulls in Healthmetryx's data, which is displayed on intuitive user dashboards and features a virtual assistant powered by watsonx Assistant. These tools enabled end users to easily monitor their health metrics in real-time, ask natural language queries, and receive insightful responses. The seamless integration of AI further enhanced the user experience, making the data not only accessible but also actionable.

## TRANSFORMING THE CUSTOMER EXPERIENCE

The integrated solution significantly transformed the customer experience by:

- **Providing Comprehensive Health Insights:** Enabling users to monitor their health metrics in real-time and receive detailed reports.

- **Improving Anomaly Detection:** Leveraging AI to identify health anomalies early, potentially preventing serious health issues.

- **Enhancing User Engagement:** Offering an intuitive interface and virtual assistant for easy interaction and query resolution.

## KEY RESULTS

The implementation of the solution yielded impressive results:

- **Increased Efficiency:** Resulting in streamlined data processing and analysis, leading to quicker insights.

- **Enhanced Reporting:** Provided comprehensive and user-friendly health reports through intuitive dashboards.

- **Improved Customer Satisfaction:** The solution received high praise from stakeholders, reflecting increased satisfaction and engagement.

- **Data-Driven Decisions:** Enabled Healthmetryx to make informed decisions based on accurate and timely health data.

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## HITTING THE MARK FOR HEALTHMETRYX

A live demonstration of the solution impressed Healthmetryx stakeholders. Chief Marketing Officer, Bob Foney, upon seeing the demo, remarked, **"I love it and it's the first time I've seen the solution in action. It's incredible."** Similarly, Louis Young, Founder and CEO, commented, **"You hit a bull's eye. It's definitely what we wanted. WOW!"**

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## FUTURE OUTLOOK

Healthmetryx expects that this solution will result in Clarinet users receiving the accurate health data they need at a faster rate, allowing for earlier detection of serious health issues, and improved treatment time.

## EXPAND YOUR BUSINESS'S ABILITIES WITH GENAI

The collaboration between Healthmetryx, AWS, and IBM Watson has greatly improved Healthmetryx's ability to monitor and analyze health metrics, offering users valuable insights and early anomaly detection. This solution sets a new standard for health monitoring, and other businesses can benefit from similar integrated solutions to enhance their capabilities.

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