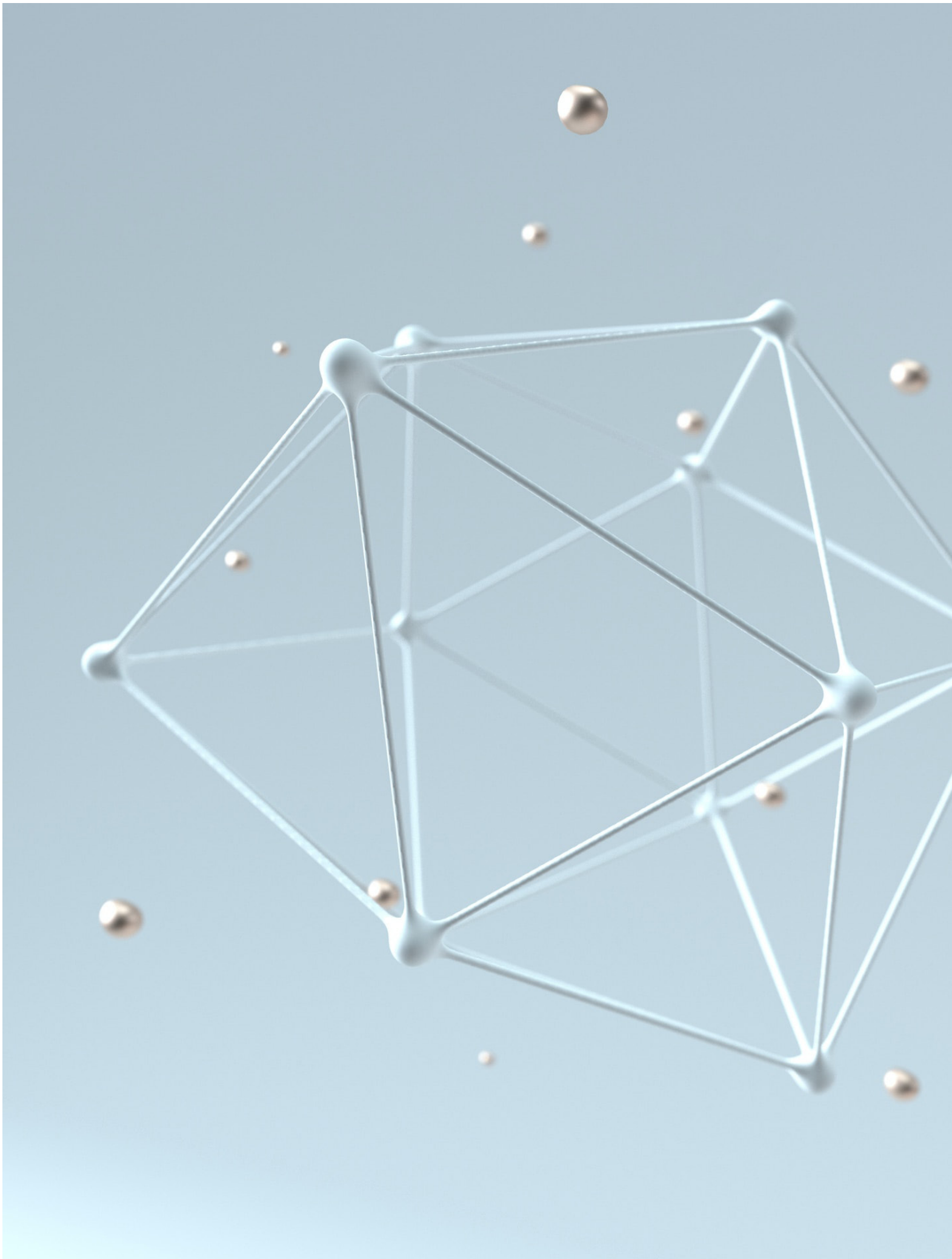




ABOUT US

Predictmedix AI Inc. (CSE: PMED) (OTCQB: PMEDF) (FRA:3QP) is an emerging provider of rapid health screening and remote patient care solutions globally. The Company's Safe Entry Stations – powered by Artificial intelligence (AI) – uses multispectral cameras and sensors to analyze physiological data patterns and predict a variety of health issues including infectious diseases, impairment by drugs or alcohol, fatigue, or various other mental illnesses. Predictmedix AI's Fitness and healthcare platform empowers Organizations with a suite of AI-powered tools to improve health and fitness outcomes.



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PROPRIETARY INFORMATION:

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INTRODUCTION

Predictmedix (PMED) Safe Entry Station (SES) is a contactless and non-invasive mechanism of data collection using a multispectral thermal imaging camera & RGB imagery that detects body temperature, breathing rate, eye redness, respiratory rate, blood pressure, alcohol impairment and many more associated variances across body parts for accurate detection. It is being used across various industries such as sports, events, heavy industries and also as a triage screening solution within healthcare environments.

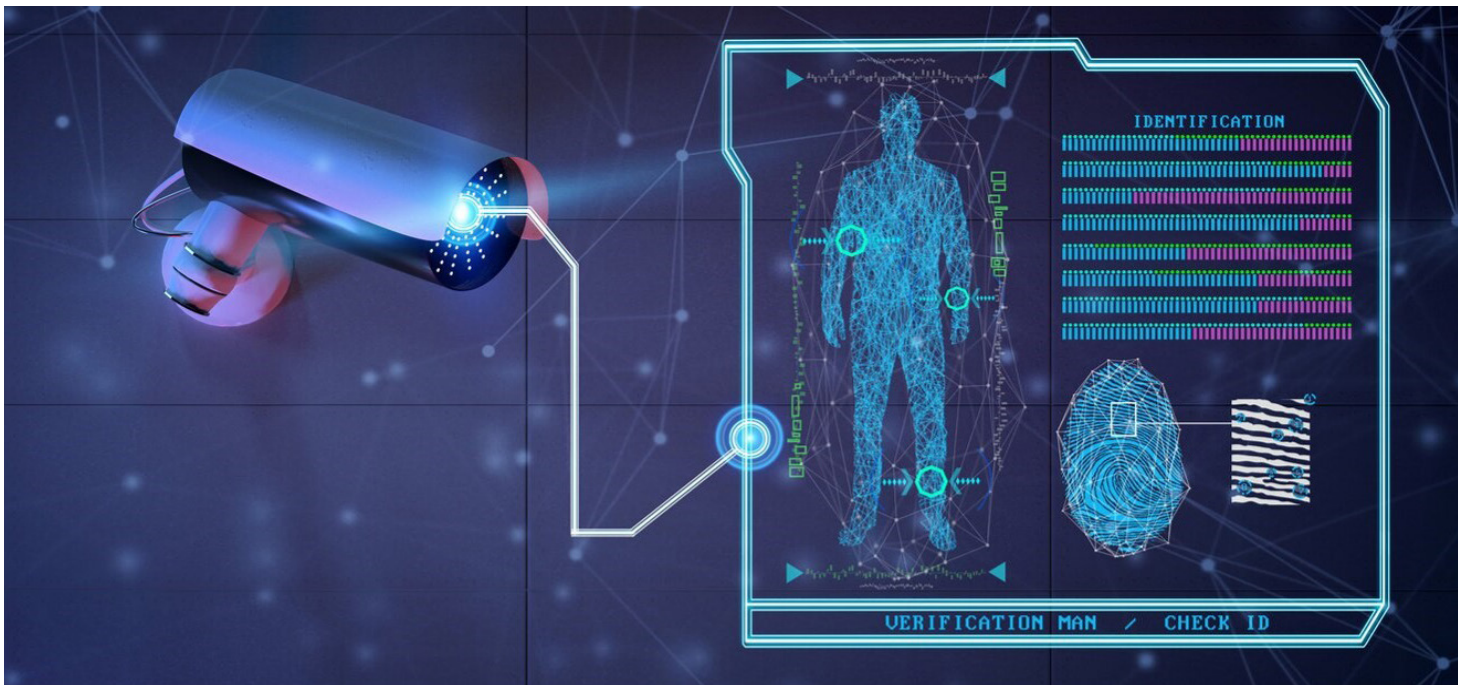
With our Artificial Intelligence and Machine Learning improvements, clients can trust the Safe Entry Stations to continue providing new functionalities and protection as new variants, fitness parameters and infectious diseases emerge.

Our screening technology is a quick, non-invasive, no-contact solution that can detect a first-look indication of symptoms. All it takes is a simple

walk-through, standing in front of the camera for under 20 secs.

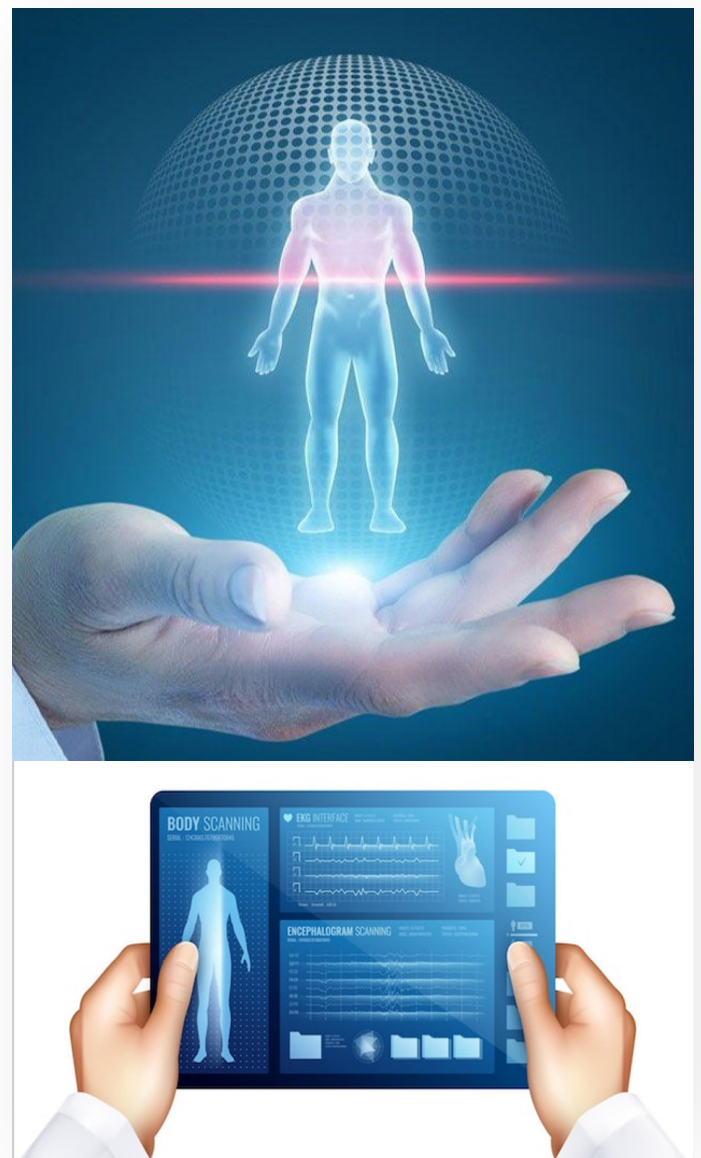
Our solution with the power of AI and sensors detects infectious disease symptoms and other fitness insights. Our AI algorithms help to give accurate results across different mental & physical parameters. The process is designed in a manner that people coming from outside will be provided sometime before testing so that they get accustomed to the testing climate and there is no bias in body temperature and other parameters.





OUR VALUE

We have developed and successfully validated New Deep Learning Models for all screening parameters with customized data captured through SES. This helps in achieving a state-of-the-art accuracy as compared to other deep models available in the literature. Predictmedix's SES which includes the multispectral camera, sensors and an AI-based program help to identify, measure, value, monitor, and report the well-being of the clients & subjects. We combine competence, experience and methodological rigor to help clients maximize their impact and value. Our codes, algorithms and image classifiers are proprietary and patented making our solution a state-of-the-art system. Predictmedix is helping transform the way human health and fitness is being measured, analyzed and delivered especially for critical industries like healthcare.



CHALLENGES



Time Consuming

Long wait times for carrying out basic vital tests, with the procedures itself taking anywhere between 3 to 18 minutes can lead to client, patient, individual or staff dissatisfaction and lead to non-adherence of safety protocols.



Staff Shortages

Insufficient staffing levels, particularly for medically trained manpower and other critical roles, can strain an organization’s ability to provide fitness and health diagnostic screening.



Infection Control

Organizations need to maintain strict infection control measures to prevent the spread of illnesses, including antibiotic-resistant infections like MRSA (Methicillin-resistant Staphylococcus aureus).



Invasive Process

The current screening and diagnostic processes are invasive and require manual intervention.



Technology Integration

Challenges related to implementing and integrating electronic health records (EHR) systems, medical devices, and other healthcare technologies can hinder workflow impacting the experience for staff, personnel or even patient care.



Digital Health Records

Creation and maintenance of Long-Term Digital Health Records due to data security, commercial and other factors restrict organizations from building their staff or individual health records.



Experience

Providing a positive experience involves addressing issues like comfort, communication, and ease of use throughout the vital scanning process which are currently a deterrent.

These are few of the multifaceted challenges that organizations encounter in their efforts to provide high-quality healthcare and fitness services for their customers, staff or any individual

TECHNOLOGY OVERVIEW

Working with deep learning models in the healthcare domain, specifically using face Photoplethysmogram (PPG) signals for various physiological measurements like heart rate, respiration rate, blood pressure, heart rate variability, and height estimation, involves several specialized steps:



Data Collection and Pre-processing:

- Collect PPG signal data from appropriate sensors or devices. PPG signals are obtained by measuring changes in blood volume using light sensors, often from the fingertip or earlobe. We are using face to extract PPG signals.
- Pre-process the PPG signals to remove noise, artifacts, and baseline drift. This might involve filtering, detrending, and removing motion artifacts.

frequency components.

- Heart rate variability can be assessed by analysing the time intervals between successive heartbeats.
- Blood pressure estimation might require more complex models and additional data sources. Currently, we are using PPG signal along with factors like BMI, age, etc.
- For height estimation, a deep learning model base on face embedding is used. Face embedding is the feature set used to map height from the face frame.



Feature Extraction:

- Extract relevant features from the pre-processed PPG signals. For heart rate estimation, we extract peaks corresponding to heartbeats. For respiration rate estimation, we analyse the signal's



Data Labelling and Annotation:

- Create labelled datasets with ground truth values for heart rate, respiration rate, and other

parameters. This involves simultaneous recordings with medical-grade devices for validation.



Model Selection and Architecture:

- Choose appropriate deep learning architectures. For PPG signal analysis, recurrent neural networks (RNNs), convolutional neural networks (CNNs), and hybrid models are used.
 - Architectures like LSTM (Long Short-Term Memory) networks or GRU (Gated Recurrent Unit) networks are also used for sequential data like PPG signals. The best model is chosen based on validation results.
-



Training and Validation:

- Divide the dataset into training and validation sets.
 - Train the deep learning model using the labeled data and appropriate loss functions (e.g., mean squared error for regression tasks).
 - Monitor the model's performance on the validation set and fine-tune hyper-parameters.
-



Model Evaluation:

- Evaluate the model's performance using separate test data that the model hasn't seen before.
 - Calculate metrics like mean absolute error and root mean squared error to assess how well the model's predictions match the ground truth.
-



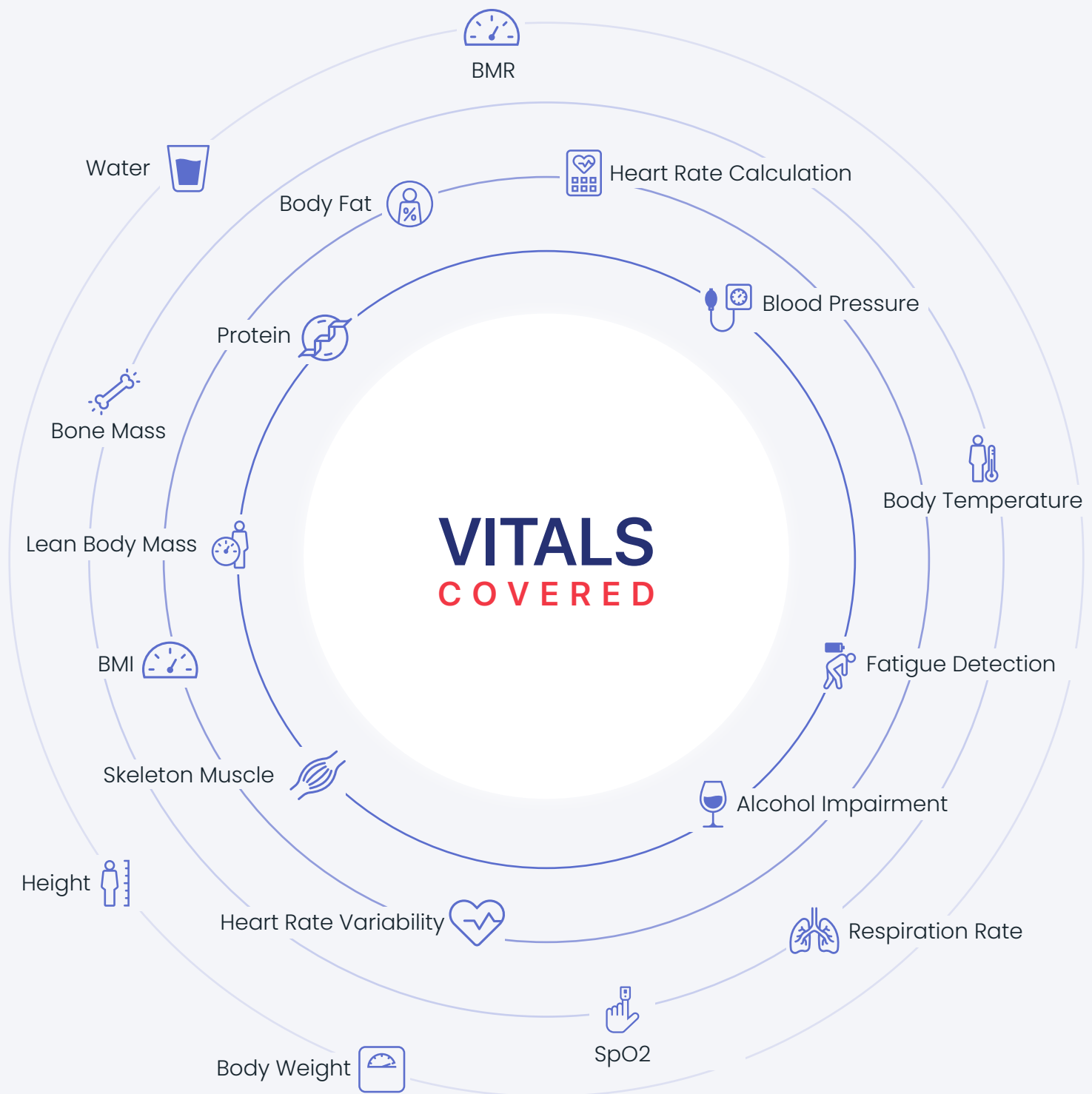
Deployment and Integration:

- Integrate the trained model into SES.
 - Ensure compliance with medical regulations and standards, as healthcare applications have strict requirements for safety and accuracy.
-



Continuous Monitoring and Improvement:

- Continuously monitor the model's performance in real-world scenarios and update the model as necessary.
- Gather feedback from healthcare professionals and individuals or patients to refine the model's accuracy and usability.



OUR USP

1

Ability to capture vitals such as Body Temperature, Heart Rate, and Respiration Rate non-invasively using multispectral facial imaging with significant accuracy. Even though some of our competition claims to perform the same detection, **our algorithms utilize unique techniques to identify & analyze and enhance Regions of Interest in these facial images.** Combining these techniques along with capturing various diverse datasets from populations in Mexico, the US, Canada, and India, we can deliver much more accurate readings. Diverse data from different regions also helped to evolve a unique deep-learning pipeline. The validation of our technology is published in 3 peer-reviewed papers and several are under review. With exhaustive testing of our arrangement, we attained fine-grained values for Deep Learning hyperparameters. It makes our process highly efficient.

Ability to detect emotions, Fatigue and Alcohol impairment non-invasively using RGB/ Thermal facial imaging as well as speech analysis with greater accuracy. We are not aware of any competition in this space since we are utilizing some unique techniques in our algorithms for de-noising the speech sample as well as enhancing audio signals to perform proper detection. **We are also utilizing a unique voting system in our algorithms to combine the results from vitals, speech analysis as well as facial images to deliver the final result.** Data has been prepared and labeled from real world and open domain for voice analytics and separate models are designed for men and women to generate high precision.

2

3

Predictmedix is the only company that has crossed the landmark milestone, having completed over 200,000 individual scans through its AI-powered Safe Entry Stations covering various vitals such as body temperature, heart rate, respiration rate, body weight, HRV, fatigue, and impairment. This achievement marks a significant advancement in utilizing machine learning to enhance accuracy and efficiency in healthcare and other industries. Safe Entry, powered by advanced artificial intelligence algorithms, have played a vital role in providing seamless and secure entry to various public and private establishments. Additionally, these stations have proven instrumental in triage functionality within hospital settings and other environments.

PMED'S solution is the only solution for alcohol impairment developed where individuals have to pass through the SES **where our program which is a set of algorithms powered by Artificial Intelligence detects the alcohol impairment through facial video sequences.** The original dataset of studio images was supplemented by blurring, rotating, and changing the lighting to capture more realistic party/bar scenarios, which improved classification accuracy. Simulated facial expressions of emotions can be distinguished from those of truly experienced emotions, due to subtle differences in patterns of facial activity. With the development of a systematic coding system that enabled the reliable measurement of facial activity, facial expressions became the most investigated component of nonverbal expressions of emotions.

4

VALUE PROPOSITION

1

Actionable Insights

With the PMED system, an organization will have Insights into Fitness & Health Data. These actionable insights can help both the individual & medical clinicians to decide the best possible course of healthcare.

2

Safe & Contactless

In addition to the readings being contactless and safe for those being screened, the operator remains completely safe from possible infection throughout readings as well.

3

Efficient

It reduces the time for individuals / personnel / subjects / patients and the organization staff to take different readings for different body vitals at the same time.

4

Digitally enabled customer experience

Organizations can elevate the employee / individual / customer / patient experience by using digital solutions to aid omnichannel individual access to many vitals.

5

Security

The system is foolproof, so specialists and non-specialists alike can operate the SES unit easily and with limited training.

6

Advance Diagnosis

SES is the best when applied in Fitness & healthcare scanning to augment diagnosis generation and therapy selection, predict risks and diseases, reduce human error, and enhance productivity.

7

Streamlined Process

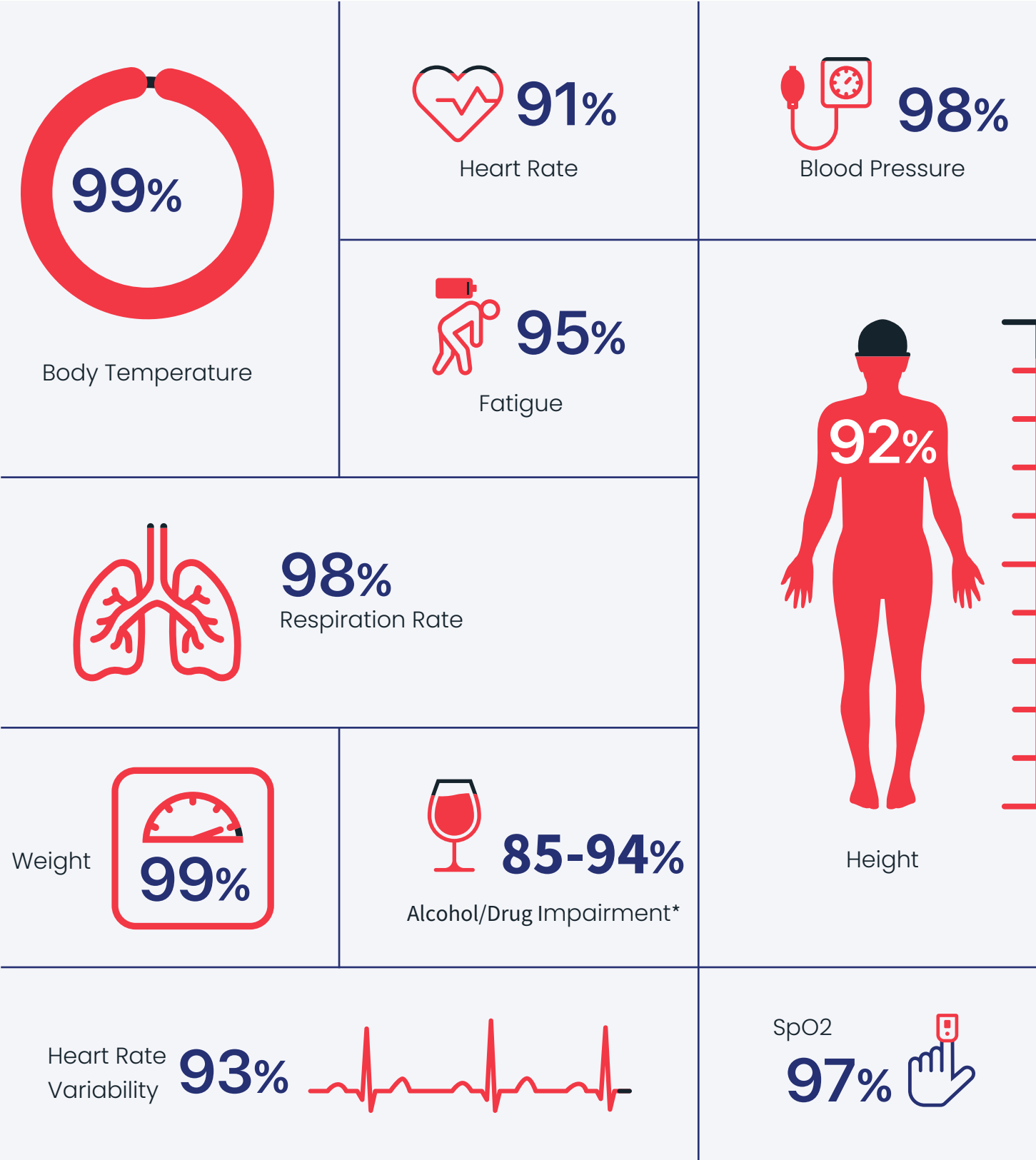
An individuals vitals can be taken in one go, instead of taking each and every vitals separately which is a time-consuming process. An individual can go through the screening process in the SES to capture all the different parameters quickly and efficiently.

8

Care & Service

Not only does the SES system help to improve diagnostic processes but also improves an individual's experience and further assists in managing medical information.

ACCURACY REPORT



Disclaimer. The accuracy is based on few thousand random subjects taken in various hospitals and other settings. However because AI models are continuously learning, as more data is fed into the system, the accuracy is expected to improve further. *Drug refers to cannabis and the accuracy range depends on whether multispectral analysis is used with or without speech analysis.

VITALS IN DETAIL



Heart Rate

What does it mean

Heart rate refers to the number of times a heart beats per minute (bpm). It is a crucial physiological measurement that reflects the speed at which a heart is pumping blood through a circulatory system.

Why is it measured / Impact of the Vital

The importance of heart rate lies in its relationship to overall cardiovascular health and fitness. Here are some key points about heart rate and its significance:

A normal and regular heart rate within a certain range is an indication that a heart is functioning effectively. It can be a valuable indicator of overall cardiovascular health.

A lower resting heart rate is generally considered a sign of good cardiovascular fitness, as it indicates that the heart is strong and doesn't have to work as hard to pump blood.

Abnormal heart rates, either too high (tachycardia) or too low (bradycardia), can be indicative of underlying health issues, hence it helps monitor health conditions.

How is it useful

Heart rate is a fundamental metric in assessing cardiovascular health, guiding exercise routines, managing stress, and indicating potential health issues. Regular monitoring and understanding of heart rate can contribute to a healthier and more active lifestyle.





Blood Pressure

What does it mean

Blood pressure refers to the force of blood against the walls of the arteries as the heart pumps it around the body. It is measured in millimeters of mercury (mm Hg) and consists of two numbers: systolic pressure (the higher number) and diastolic pressure (the lower number).

Why is it measured / Impact of the Vital

Blood pressure is crucial for ensuring that blood flows through the body's arteries and reaches all tissues and organs. It helps deliver oxygen and nutrients while also removing waste products.

Proper blood pressure ensures that organs receive the blood supply they need to function optimally. Inadequate blood flow due to low blood pressure can lead to organ damage or failure.

Blood pressure is a key indicator of cardiovascular health. High blood pressure (hypertension) is a significant risk factor for various heart-related conditions, including heart disease, stroke, and heart failure.

How is it useful

Maintaining healthy blood pressure levels is crucial for overall health and longevity. It's recommended to have regular blood pressure checks, especially if you have risk factors for hypertension or cardiovascular disease.



SpO2

What does it mean

Oxygen saturation is the fraction of oxygen-saturated hemoglobin relative to total hemoglobin (unsaturated + saturated) in the blood. The human body requires and regulates a very precise and specific balance of oxygen in the blood.

Why is it measured / Impact of the Vital

SpO2 provides valuable information about how well oxygen is being transported from the lungs to the body's tissues. It indicates the level of oxygen saturation in the blood. It is a critical parameter in assessing and managing a person's respiratory and overall health. It provides essential information about oxygen levels in the blood, helping healthcare providers make informed decisions about treatment and care.

SpO2 levels are closely monitored in situations where there may be respiratory distress or compromise, such as during surgery, in intensive care units, or during recovery from illnesses like pneumonia. It is frequently used to monitor individuals with respiratory conditions like chronic obstructive pulmonary disease (COPD), asthma, and pneumonia. It helps assess the effectiveness of treatment and oxygen therapy.

SpO2 levels can be affected by cardiovascular conditions that impact blood flow and oxygen delivery. Monitoring SPO2 can help in the management of conditions like heart failure. For patients receiving supplemental oxygen therapy, SPO2 levels are monitored to ensure that the prescribed oxygen levels are effectively increasing oxygen saturation in the blood.

How is it useful

The measurement of oxygen saturation plays a crucial role in the management of patients with various health conditions, including chronic obstructive pulmonary disease (COPD), asthma, pneumonia, lung cancer, anemia, heart failure, heart attack, and other cardiopulmonary disorders.



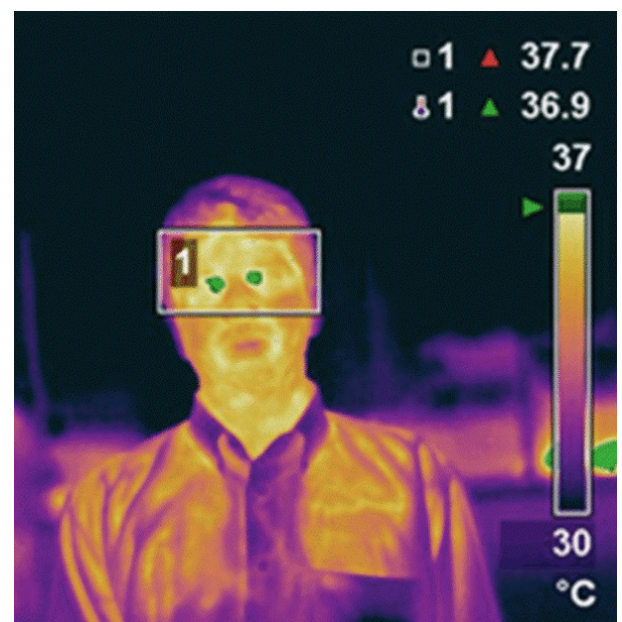
Body Temperature

What does it mean

Body temperature refers to the degree of heat generated by the body and is typically measured in degrees Fahrenheit (°F) or Celsius (°C). It is regulated by the body's thermoregulatory system, which aims to maintain a stable internal temperature despite external temperature fluctuations.

Why is it measured / Impact of the Vital

Maintaining a stable body temperature within a normal range is crucial for overall health and well-being. It's important to note that deviations from the normal range, particularly if persistent or accompanied by other symptoms, may be indicative of underlying health issues and should be evaluated by a healthcare professional.



Homeostasis: Maintaining a stable body temperature is critical for proper physiological function. This is part of the body's broader effort to maintain homeostasis, or internal balance, which allows cells and organs to function optimally.

How is it useful

Enzymes, which are essential for chemical reactions in the body, have specific temperature ranges at which they function optimally. Deviations from the normal body temperature can affect enzyme activity, potentially disrupting metabolic processes.



Fatigue Detection

What does it mean

Fatigue detection refers to the identification of signs and symptoms associated with physical or mental tiredness and exhaustion. It involves recognizing when an individual is experiencing a significant decrease in alertness, focus, and overall energy levels.

Why is it measured / Impact of the Vital

Fatigue detection is vital for safety, productivity, and overall well-being in various settings. It involves recognizing the signs of physical and mental exhaustion and taking appropriate

measures to prevent accidents, improve performance, and promote health. If you or someone you know is experiencing chronic or severe fatigue, it's important to seek advice from a healthcare professional for proper evaluation and management.

How is it useful

Safety in High-Risk Environments: Fatigue detection is crucial in high-risk settings like transportation (e.g., driving, piloting), healthcare (e.g., medical professionals working long shifts), and manufacturing (e.g., workers operating heavy machinery). Recognizing fatigue can help prevent accidents and errors.

Enhancing Workplace Productivity: In various industries, fatigue can lead to decreased productivity, lower quality work, and an increased risk of accidents. Detecting fatigue allows for interventions such as breaks, shift adjustments, or rest periods, which can improve overall work performance.

Preventing Accidents and Injuries: Fatigue-related accidents and injuries can be severe and even fatal. Detecting fatigue can prompt measures to reduce the risk of accidents, especially in critical situations like driving or operating heavy equipment.



Alcohol Impairment Detection

What does it mean

Alcohol impairment refers to the diminished physical and mental abilities resulting from the consumption of alcohol. It affects an individual's cognitive functions, motor skills, judgment, and behavior. This impairment can have significant consequences for both the individual and society at large.

Why is it measured / Impact of the Vital

Recognizing alcohol impairment is crucial for maintaining safety, preventing accidents, promoting responsible drinking, and protecting individual and



public health. It's important for individuals, communities, and organizations to be aware of the signs of alcohol impairment and take appropriate action when necessary. If you or someone you know is struggling with alcohol-related issues, seeking help from a healthcare professional or support organization is recommended.

How is it useful

One of the most critical aspects of alcohol impairment is its impact on driving. Driving under the influence of alcohol significantly impairs reaction times, coordination, and decision-making, leading to a higher risk of accidents, injuries, and fatalities.

Alcohol impairment not only affects driving but also increases the risk of accidents in various settings, such as at home, in the workplace, or during recreational activities. Recognizing alcohol impairment can help prevent injuries and save lives.

G

Respiration Rate

What does it mean

Respiration rate refers to the number of breaths a person takes in a minute. Each breath involves the process of inhaling oxygen and exhaling carbon dioxide. This rate can vary depending on factors like age, health status, and activity level.



Why is it measured / Impact of the Vital

Monitoring respiration rate provides important information about a person's respiratory health. Abnormalities in the rate, such as rapid or shallow breathing, may be indicative of underlying respiratory conditions or distress.

Respiration is essential for the exchange of oxygen and carbon dioxide in the body.

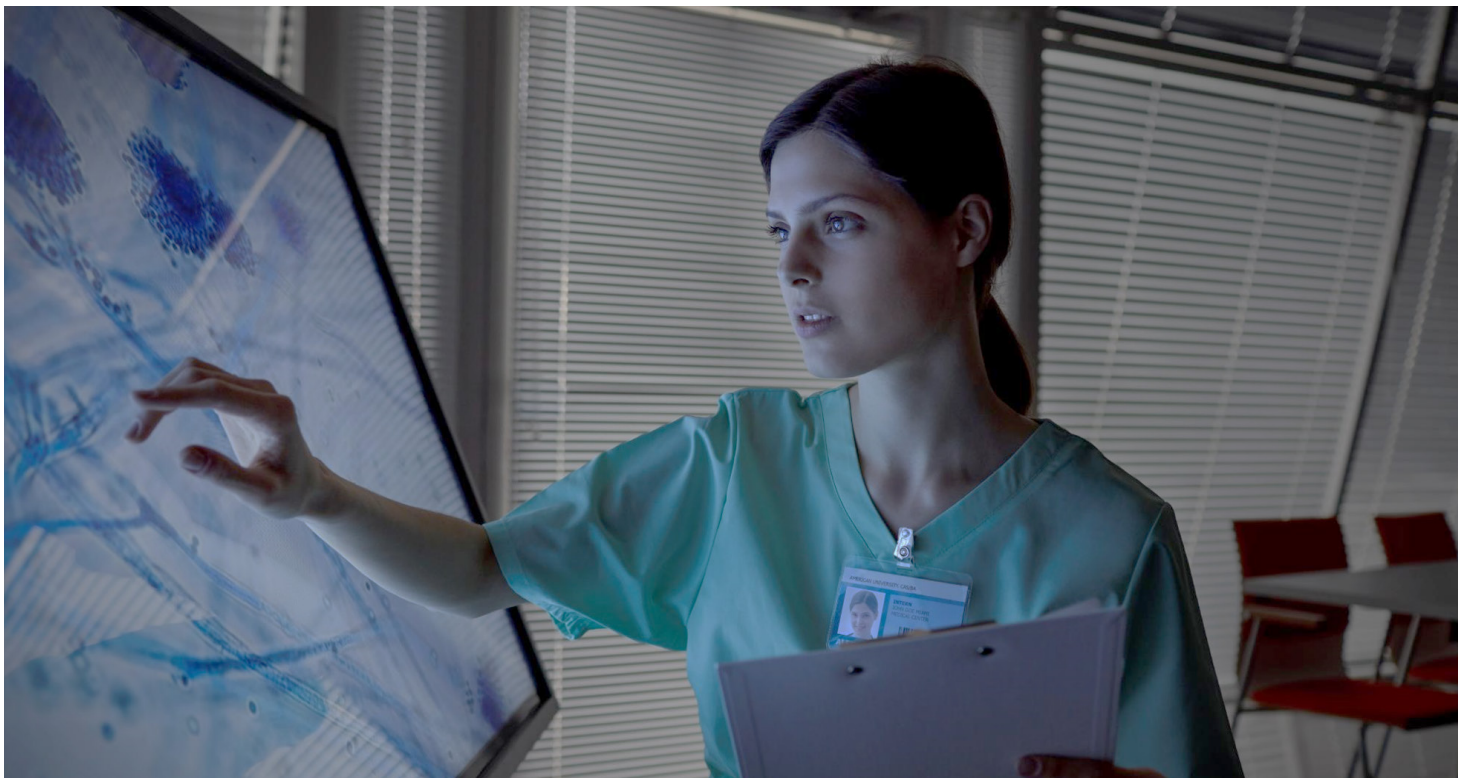


Oxygen is necessary for the functioning of cells, and carbon dioxide is a waste product that needs to be expelled.

Respiration rate is tied to metabolism. Faster breathing can indicate an increased metabolic rate, which can occur during exercise or when the body is fighting an infection.

How is it useful

Respiration rate is a critical physiological parameter that provides valuable information about a person's respiratory health and overall well-being. Monitoring it can aid in the early detection of respiratory issues, guide medical interventions, and promote better overall health. If there are concerns about respiration rate, it's important to consult a healthcare professional for proper evaluation and advice.



Heart Rate Variability

What does it mean

Heart Rate Variability (HRV) refers to the variation in time intervals between consecutive heartbeats. It's a measure of the adaptability and flexibility of the heart's autonomic nervous system, which controls involuntary bodily functions like heart rate, digestion, and respiratory rate.

Why is it measured / Impact of the Vital

HRV is a key indicator of the balance between the sympathetic (fight or flight) and parasympathetic (rest and digest) branches of the autonomic nervous system. A higher HRV is associated with better autonomic nervous system function. Research suggests that higher HRV is associated with a reduced risk of cardiovascular diseases such as heart attack and stroke. It indicates a more responsive and adaptable cardiovascular system.

HRV can be used to assess sleep quality and disruptions. It is a component of sleep studies and can be a useful tool in identifying sleep disorders.

How is it useful

Heart Rate Variability is an important physiological metric that provides valuable insights into the body's adaptability, stress response, and overall health. Monitoring HRV can be a useful tool in assessing and managing various aspects of physical and mental well-being. If you're interested in using HRV as a health management tool, it's recommended to consult with a healthcare professional or use specialized devices and apps designed for this purpose.



Body Weight

What does it mean

Body weight refers to the total mass or the amount of matter comprising an individual's body. It includes everything within the body, such as bones, muscles, organs, fluids, and fat.

Why is it measured / Impact of the Vital

Body weight is influenced by a person's nutritional intake and dietary habits. Maintaining a healthy body weight often reflects a balanced diet that provides the necessary nutrients for optimal health. Maintaining a healthy body weight is important for cardiovascular health. Excess body fat, especially around the abdomen, is a risk factor for heart disease.



Body weight can influence fertility and reproductive health, especially in women. Both underweight and overweight conditions can affect hormone levels and menstrual regularity.

How is it useful

It's important to note that body weight is just one aspect of overall health. Other factors such as body composition, muscle mass, and distribution of fat are also important considerations. Additionally, individual differences in body composition can affect what constitutes a healthy weight for a particular person. Consulting with a healthcare professional can provide personalized guidance on maintaining a healthy body weight.



Height

What does it mean

Height refers to the vertical measurement of an individual from the top of the head to the bottom of the feet. It is an important anthropometric measurement and is often used as an indicator of growth, development, and overall health.

Why is it measured / Impact of the Vital

It's important to note that while height is an indicator of overall health and development, it is just one of many factors to consider. Height is a key indicator of physical growth and development, especially in children and adolescents. Monitoring height over time can help assess whether a person is growing at a healthy rate.

Adequate nutrition is crucial for proper growth, and height can be an indirect indicator of a person's nutritional status. Malnutrition, particularly during critical growth periods, can lead to stunted growth.



How is it useful

Height can provide a rough indication of bone health and development, as bones play a significant role in determining overall height. Deviations from expected height patterns can be indicative of growth disorders or underlying medical conditions that may require further evaluation and treatment.

BMI

What does it mean

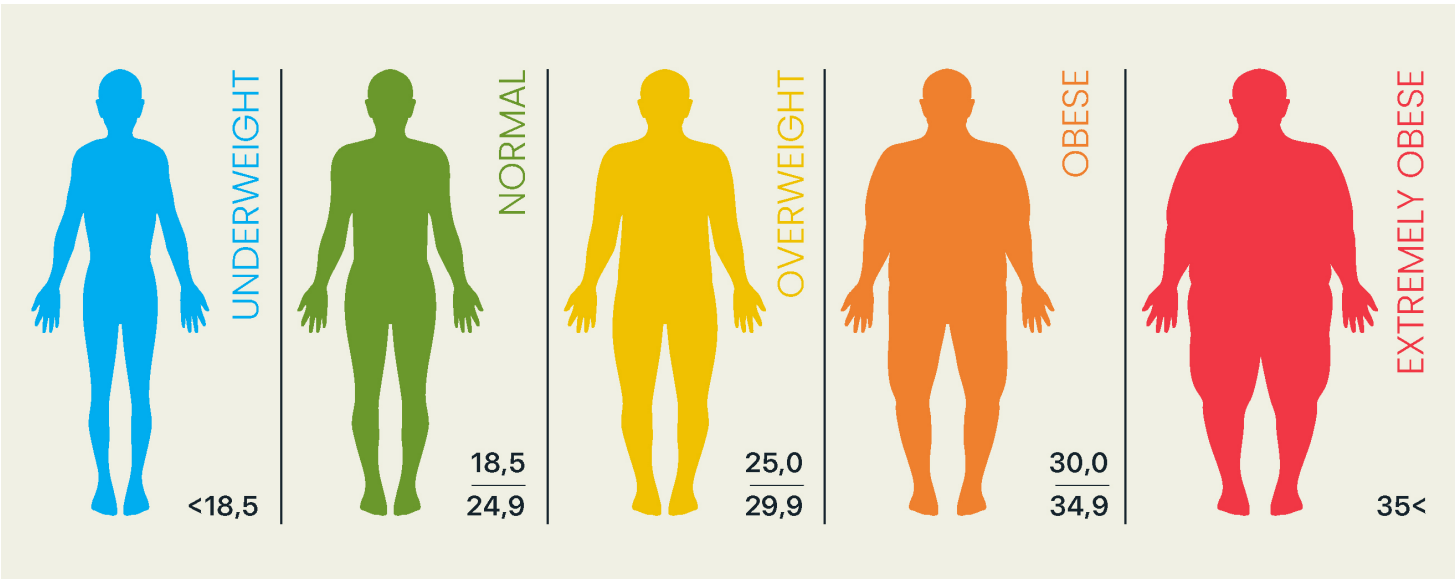
BMI, or Body Mass Index, is a numerical value derived from an individual's weight and height. It is a widely used screening tool to categorize individuals into different weight status categories.

Why is it measured / Impact of the Vital

BMI is associated with various health risks. For example, individuals with a high BMI (indicative of overweight or obesity) are at a greater risk for conditions like heart disease, type 2 diabetes, hypertension, and certain cancers.

A low BMI may indicate that an individual is underweight, which can be associated with

nutritional deficiencies and other health concerns. It can prompt further assessment and intervention.



How is it useful

It's important to note that BMI is a useful screening tool, it should be used in conjunction with other assessments and under the guidance of a healthcare professional.

Healthcare professionals may use BMI as a starting point for discussing weight management strategies with their patients. It helps guide discussions about appropriate goals and interventions.

Skeletal Muscle

What does it mean

Skeletal muscles, also known as voluntary muscles or striated muscles, are the muscles attached to the skeleton that allow us to move our bodies. They are under conscious control, meaning we can decide when to contract or relax them.

Why is it measured / Impact of the Vital

The diaphragm, a large skeletal muscle, plays a vital role in the breathing process. It contracts and relaxes to create changes in thoracic pressure, allowing air to be drawn into and expelled from the lungs.

Skeletal muscles in the throat and mouth are essential for swallowing food and liquids, as well as for articulating speech sounds. Skeletal muscles surround and support internal organs, providing them with protection and stability. Skeletal muscles are a major site of energy expenditure in the body. The process of muscle contraction requires a significant

amount of energy, which can contribute to the overall metabolic rate.

How is it useful

Skeletal muscles are essential for virtually all aspects of physical movement and play a central role in maintaining posture, stability, and overall functionality. They are a key component of overall health and well-being. Regular exercise and strength training are important for maintaining healthy skeletal muscles.



Lean Body Mass

What does it mean

Lean body mass (LBM), also known as fat-free mass, refers to the total weight of everything in your body except for fat. This includes muscle, bones, organs, and fluids. LBM is an important metric for understanding body composition.

Why is it measured / Impact of the Vital

It is predominantly composed of muscle tissue, which is essential for physical strength, stability, and the ability to perform everyday tasks, such as lifting, walking, and standing.

Bone mass is a component of lean body mass. Maintaining healthy bone density is crucial for overall skeletal health and reducing the risk of fractures.

How is it useful

Lean Body Mass helps in weight management, a higher proportion of lean body mass is associated with a higher BMR, which can make it easier to maintain a healthy weight and manage body fat levels.



Bone Mass

What does it mean

Bone mass refers to the total amount of bone tissue in the body. It is a measure of the quantity of bone, and it plays a crucial role in overall skeletal health and function.

Why is it measured / Impact of the Vital

Bone provides the structural framework for the body, supporting muscles, tendons, and ligaments. It gives the body its shape and allows for movement. It protects vital organs

such as the brain, heart, and lungs. For example, the skull protects the brain, and the ribcage shields the heart and lungs.

Bone mass is involved in regulating calcium levels in the blood, which is critical for normal cellular function. If blood calcium levels drop too low, bones release calcium into the bloodstream.

Higher bone mass is associated with greater bone strength, which can help reduce the risk of fractures, especially in conditions like osteoporosis where bones become more fragile.

How is it useful

It's important to note that bone health can be influenced by factors such as genetics, nutrition, physical activity, hormonal balance, and lifestyle choices (such as smoking and excessive alcohol consumption). Taking steps to maintain or improve bone mass through a balanced diet rich in calcium and vitamin D, weight-bearing exercise, and other healthy lifestyle choices is crucial for overall skeletal health. If there are concerns about bone health, consulting with a healthcare professional is recommended.



Protein

What does it mean

Protein levels in the body refer to the concentration of proteins present in various bodily tissues, fluids, and cells. Proteins are large, complex molecules made up of amino acids that play critical roles in nearly every biological process.

Why is it measured / Impact of the Vital

Proteins form the structural basis of tissues, including muscles, bones, skin, and organs. They provide the framework for cellular growth, maintenance, and repair. Enzymes are specialized proteins that facilitate chemical reactions in the body. They are crucial for processes like digestion, metabolism, and cellular energy production.



Some hormones are protein-based and play key roles in regulating various physiological functions, such as insulin (regulates blood sugar levels) and growth hormone (regulates growth and development).

Proteins help regulate fluid balance in the body by maintaining the correct concentration of water and electrolytes in the blood and tissues.

How is it useful

Maintaining appropriate protein levels in the body is crucial for overall health and well-being. It's important to consume an adequate amount of protein throughout the diet to support these essential functions.



BMR

What does it mean

BMR stands for Basal Metabolic Rate. It represents the number of calories your body requires to maintain basic, essential functions while at complete rest. These functions include breathing, circulation, cell production, and maintaining body temperature.

Why is it measured / Impact of the Vital

It accounts for most of the calories your body burns each day, typically around 60-70% of your total daily energy expenditure. Understanding your BMR helps in determining your daily caloric needs. Knowing your BMR can assist in creating a personalized dietary plan for weight management. It helps determine how many calories you need to consume to maintain, gain, or lose weight.

It is a key factor in creating balanced and sustainable meal plans. It ensures you're getting the right amount of energy to support essential bodily functions.

Understanding your Basal Metabolic Rate is a valuable tool for designing a balanced diet, setting realistic fitness goals, and supporting overall health and well-being. It provides a foundation for making informed decisions about nutrition and exercises tailored to your individual needs and goals.

How is it useful

Comparing your calorie intake to your BMR can help identify whether you're consuming an appropriate amount of energy for your body's needs. This is crucial for avoiding undernutrition or overeating. BMR influences nutrient utilization, as many essential nutrients are required for basic bodily functions. Proper nutrition is essential to support your BMR.

 FOR FEMALES	
Body Weight	Bone Mass
< 50 Kg	1.95
50 – 70 Kg	2.4
> 76 Kg	2.95
 FOR MALES	
Body Weight	Bone Mass
< 65 Kg	2.65
65 – 95 Kg	3.29
> 95 Kg	3.69



Water

What does it mean

Water is a vital substance that makes up a significant portion of the human body. It plays numerous critical roles in maintaining overall health and ensuring the proper functioning of various bodily systems.

Why is it measured / Impact of the Vital

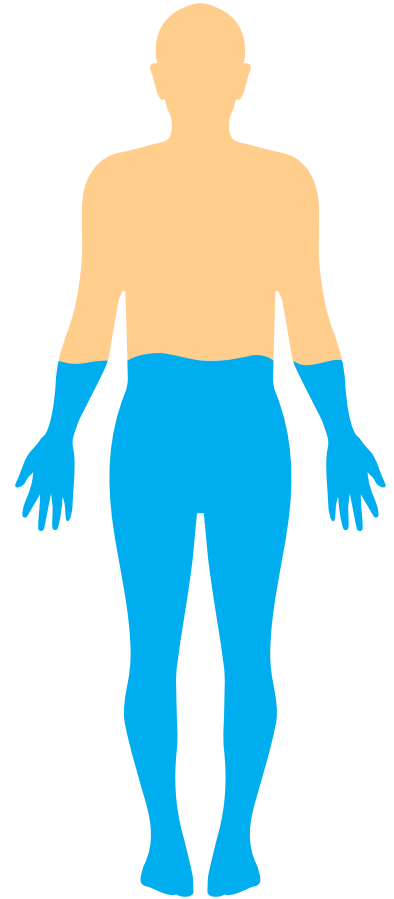
Water is essential for maintaining proper hydration levels in the body. It helps transport nutrients to cells, regulate body temperature, and facilitate various metabolic processes.

It is an indispensable component of the human body, influencing virtually every physiological process. Staying adequately hydrated is crucial for maintaining health, energy levels, and overall well-being.

Water helps regulate body temperature by enabling the evaporation of sweat, which dissipates heat and helps maintain a stable internal temperature.

How is it useful

Water is a key component of synovial fluid, which lubricates joints and reduces friction between bones during movement. It aids in the breakdown of food in the digestive system. It helps dissolve nutrients, making them more accessible for absorption in the intestines.



Body Fat

What does it mean

Body fat refers to the adipose tissue stored in the body, which is primarily composed of fat cells (adipocytes). It serves several important functions and is categorized into two main types: essential body fat and storage body fat.

Why is it measured / Impact of the Vital

It serves as a stored form of energy. When the body needs extra energy, it can break down and utilize fat stores to meet its energy demands.

Body fat is essential for various physiological functions, excessive accumulation, especially

of visceral fat (around internal organs), can be associated with health risks. Striving for a healthy balance of body fat through a balanced diet, regular physical activity, and overall healthy lifestyle habits is important for optimal health and well-being.

It acts as a buffer against extreme temperatures, both cold and hot since subcutaneous fat (fat located just beneath the skin) provides insulation, helping to regulate body temperature. Visceral fat, which surrounds internal organs, provides cushioning and protection. It helps shield organs from external forces and impacts.

How is it useful

Adequate body fat levels are essential for reproductive health, especially in women. Fat stores help regulate hormonal balance and support menstrual regularity.

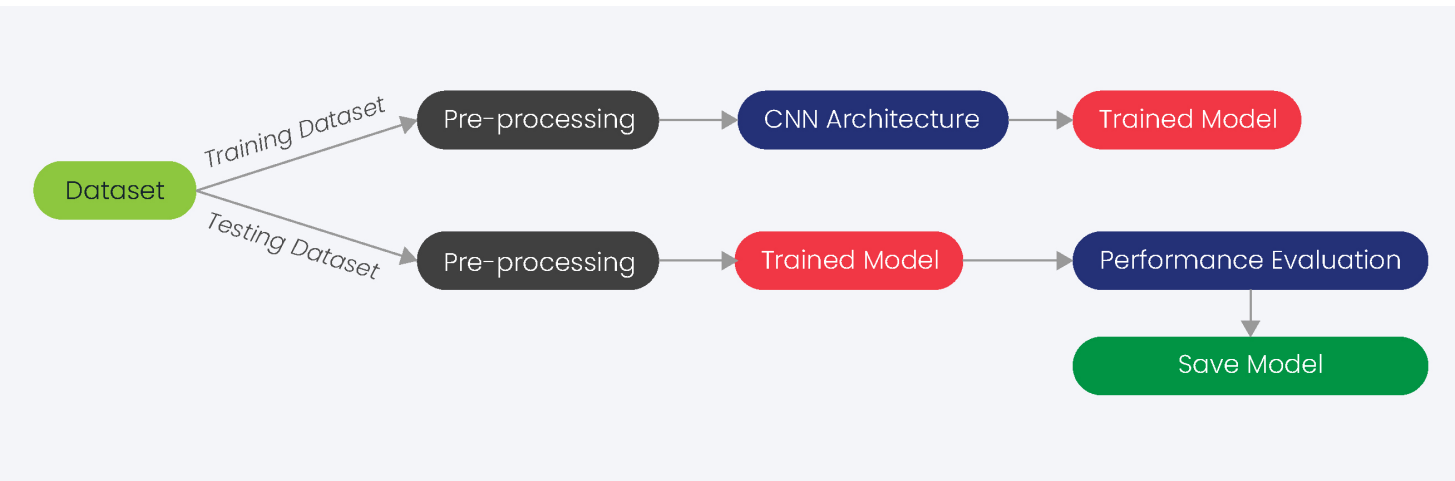
Road Map

As a leader in Non-Invasive & Contactless AI healthcare scanning, we are constantly evolving and enhancing our solutions to capture additional vitals and other mental wellbeing parameters that may help the various industries.

Some of our upcoming parameters that are currently being tested include:

- Oxygen Saturation (SpO2),
- Depression
- Parasympathetic Activity
- Sleep Disorders / Sleep Apnea
- Blood Sugar
- Cholesterol, Triglycerides, Urea, Creatinine.

These would be made available as upgrades to our clients as and when they achieve the required accuracy levels.



Conclusion

Obtaining the above parameters quickly will be helpful to alert organizations, healthcare practitioners and required people about early warning signs, detect a deteriorating individual very quickly, allow for further investigations and health management options. The risk for costly accidents can be avoided, proper monitoring and digital health records can be created using the same system while ensuring a fast, non-invasive, contactless, digital and convenient experience for all individuals, staff, personnel, patients, manpower or clients every time.

OUR PUBLISHED RESEARCH WORK

SL. NO.	TITLE	LINK	PUBLISH
1	A NOVEL DEEP LEARNING TECHNIQUE FOR ALCOHOL IMPAIRMENT USING VISUAL AND ACOUSTIC FEATURES	https://ikprress.org/index.php/JOMahr/article/view/7868	27 September 2022
2	DATA STUDY OF SAFE ENTRY STATION (SES) TO ENSURE FIT FOR DUTY	https://ikprress.org/index.php/JIRMEPS/article/view/7936	17 November 2022
3	EVALUATION OF FATIGUE LEVEL BY SAFE ENTRY STATION USING NOVEL DEEP LEARNING TECHNIQUE	https://www.ikppress.org/index.php/JOBARI/article/view/7985	20 December 2022
4	NOVEL AI BASED APPROACH FOR HUMAN BODY TEMPERATURE EVALUATION USING INNER EYE CANTHUS LOCALIZATION FROM CAMERA FEED	https://ikprress.org/index.php/JOBARI/article/view/7897	17 October 2022

CERTIFICATIONS



ISO 13485:2016 (Medical Devices – Quality Management Systems)

CE Certificate



Validation

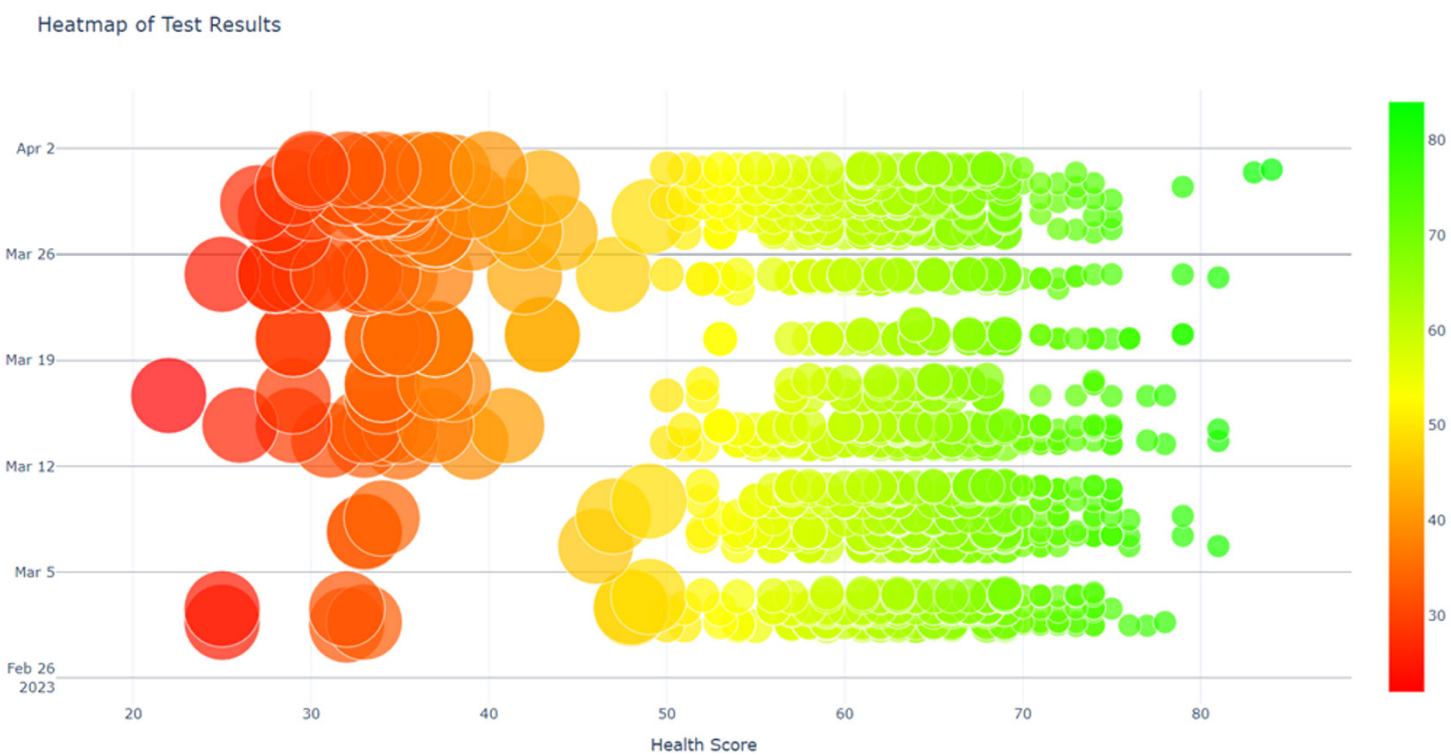
- ✓ Completely AI-Driven Healthcare Solution that is contactless
- ✓ Globally Accredited Solution for Impairment Symptoms
- ✓ Infectious Disease Symptom Identification
- ✓ ISO & HIPPA Compliant
- ✓ US FDA & Health Canada Approved Hardware Components
- ✓ Multifaceted Health Screening in less than 20 seconds
- ✓ Validation done across US, Canada, Mexico, India, Indonesia



CLIENT DASHBOARD & HEATMAP

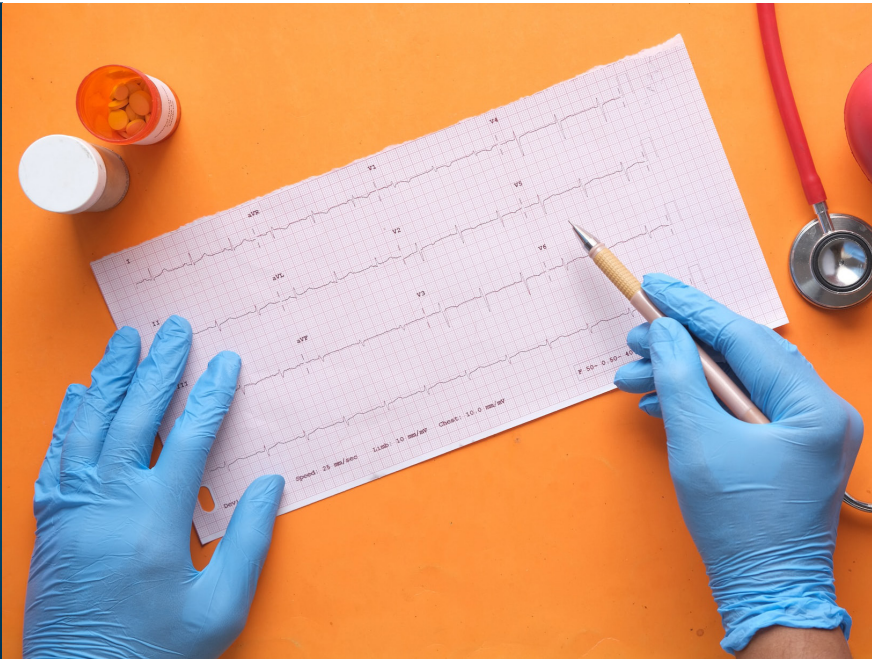
Client Dashboard reporting helps you make better-informed decisions by allowing you to not only visualize vital readings but also interact with data directly within the dashboard to analyze trends and health insights.

Reports are created by pulling together data from the client dashboard to glance at a graphical snapshot of a company's operations. Dashboard reporting indicating Total scans, red scans Vs green scans on a daily basis, weekly basis, and Yearly basis gives everyone in an organization, irrespective of technological expertise, the ability to analyze data inreal-time [19].



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