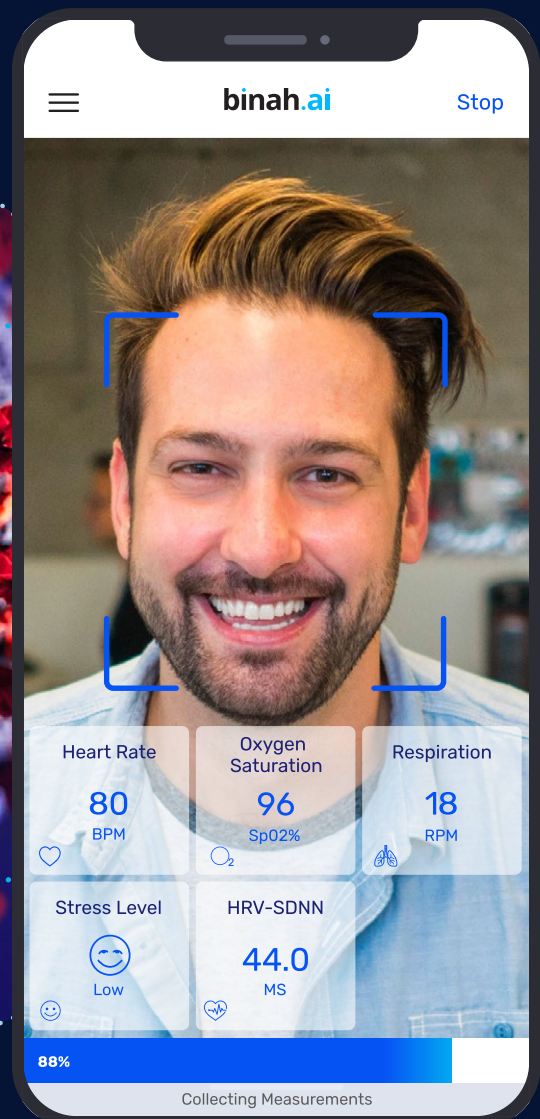
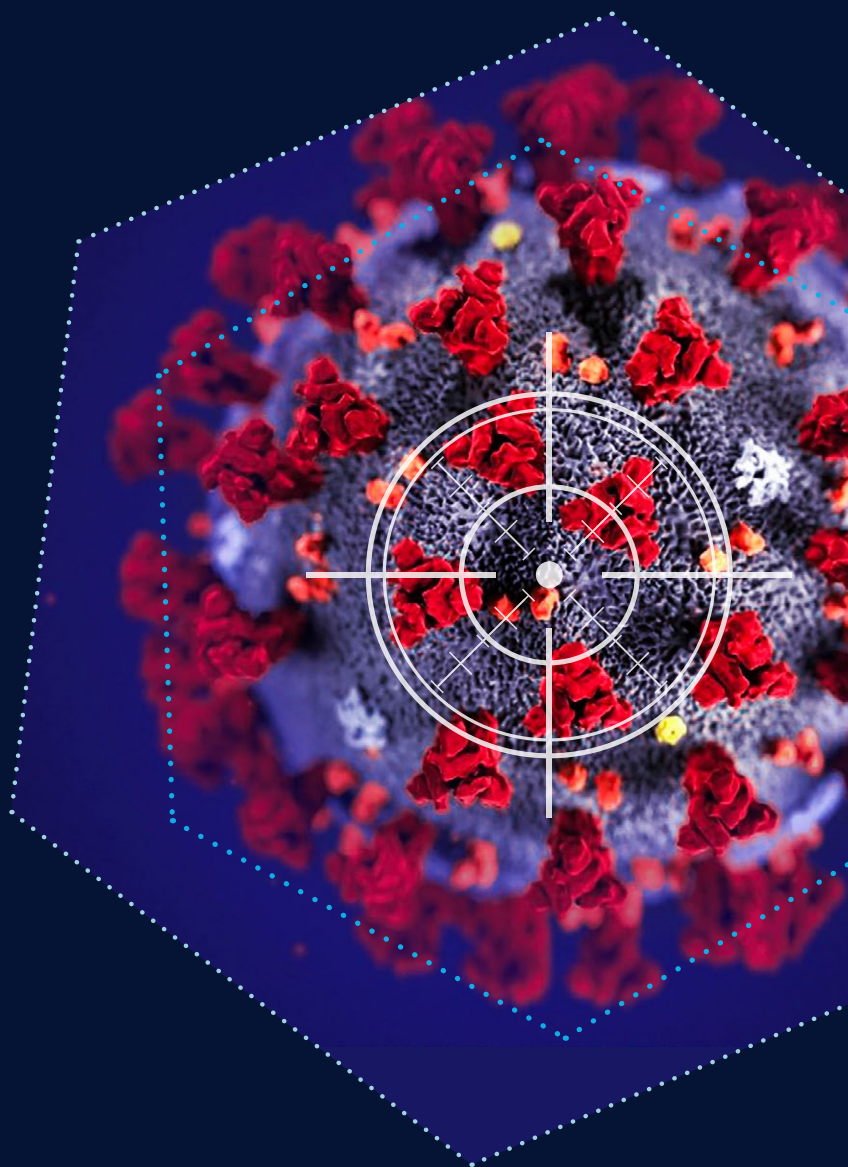


Combating the Spread of COVID-19 with Binah.ai's Real-Time, Remote Vital Signs Monitoring Solution

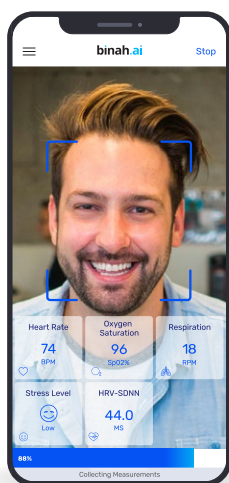


In an effort to prevent the spread of COVID-19, millions around the world are under quarantine at home. Crowded public areas, including hospitals, are a major factor in the struggle to curtail the spread of the virus. The difficulty for healthcare providers is being able to monitor and triage possibly infected individuals, all while limiting exposure of COVID-19 to the non-infected patients and medical staff.

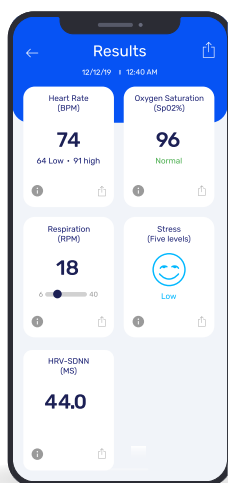
Here's How Binah.ai Can Help

Binah.ai's real-time, remote vital signs monitoring app allows anyone to easily measure oxygen saturation, respiration rate, heart rate and HRV – just by looking into a smartphone camera. These important measurements, in combination with other symptoms – such as fever, coughing or a sore-throat – can greatly aid health professionals in deciding whether a patient should seek further medical attention or, conversely, reduce risking exposure by remaining safely at home.

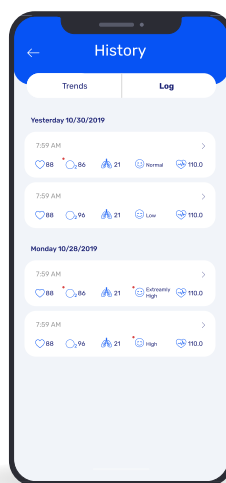
Binah.ai's white label app platform can be easily customized with the medical services' brand and made available in any language.



Real-time vital signs extraction using front facing camera



Quick overview of health status in less than 2 mins



Displays detailed view of measurements' history



Shows clear view of health measurements trends

Binah.ai's app displays a history of measurements and tracks trends over the last 7, 14 and 21 days – indicating changes in Oxygen Saturation (SpO2) levels over time.

The Importance of Oxygen Saturation Measuring

On March 13, 2020, the World Health Organization (WHO) has released a document called “Clinical management of severe acute respiratory infection (SARI) when COVID-19 disease is suspected”. The document emphasizes the critical importance of monitoring oxygen saturation (SpO2) in COVID-19 suspects, as an indication of a respiratory-related issue. Numerous other medical publications* show the relation between low levels of SpO2 rates and prediction of pneumonia.

A temperature higher than 37.8°C, a crackling sound in the patient's lungs, a pulse rate of more than 100 beats per minute, and oxygen saturation in the blood lower than 95%. They found that 86.1% of patients with pneumonia exhibited at least one of these signs.

Tachycardia, tachypnoea and reducing oxygen saturation are the early indicators of deterioration.

The following symptoms have been found present in patients with COVID-19:

- Raising Heart Rate
- Increasing Respiratory rate
- Reducing Oxygen Saturation

Remote triage of Covid19-suspect patients

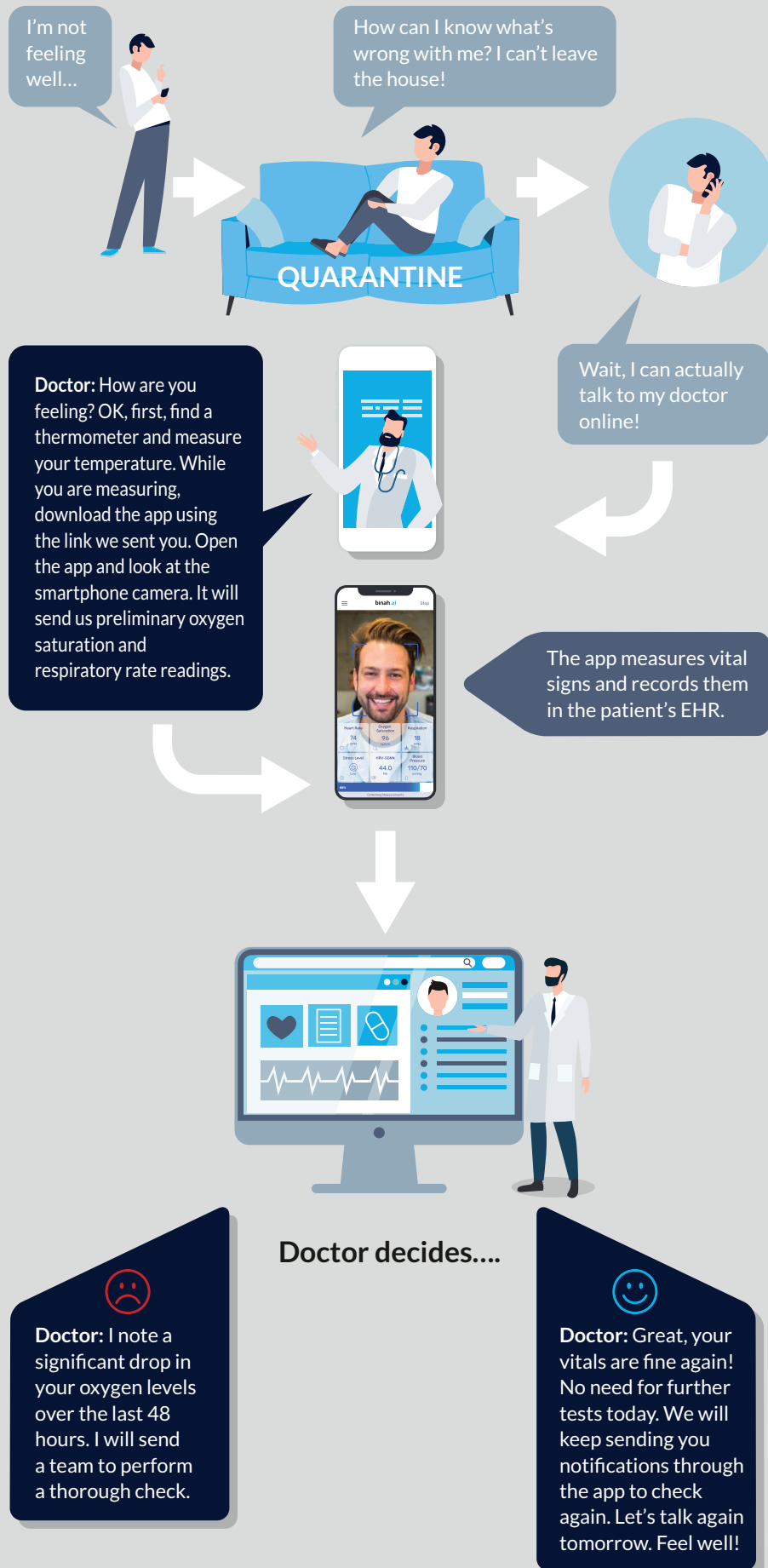
As many people are now quarantined at home, some of them may feel symptoms similar to those of COVID-19.

Not knowing what is wrong with them, and not being allowed to leave their homes for a check-up, they can turn to online medical services. In such a case, a physician can enquire regarding the person's symptoms – such as body temperature, cough, sore-throat, tiredness and more. All these symptoms can be easily measured with a home thermometer and by observation.

When it comes to oxygen saturation or respiration rate, almost no one is equipped with proper tools to measure these from home.

Here is where Binah.ai's app can help – by allowing patients to measure these important vital signs from home using only a smartphone camera, and to report them back to the physician. As measurement time is extremely fast – under 2 minutes – the results can be communicated during the call with the physician or automatically recorded into the patient's EHR.

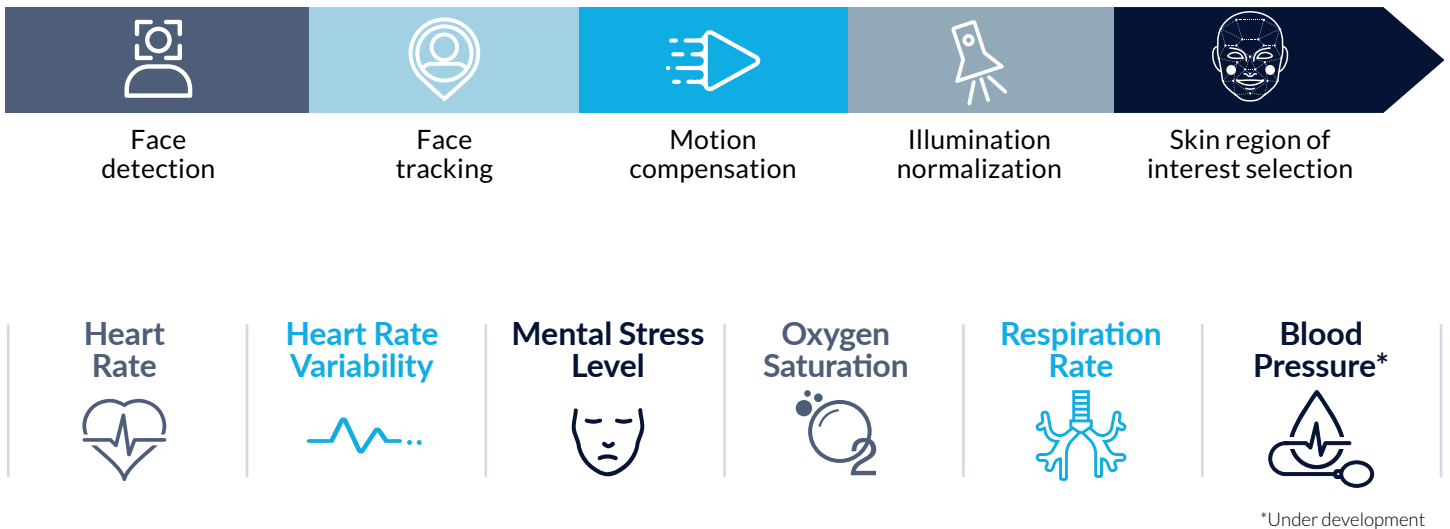
Based on the vital measurements extracted by Binah.ai's app, along with the rest of the symptoms detected, physicians can have a better, real-time understanding of the patient's status, and be able to more effectively triage potential COVID-19 patients, thus preventing overloading of medical facilities.



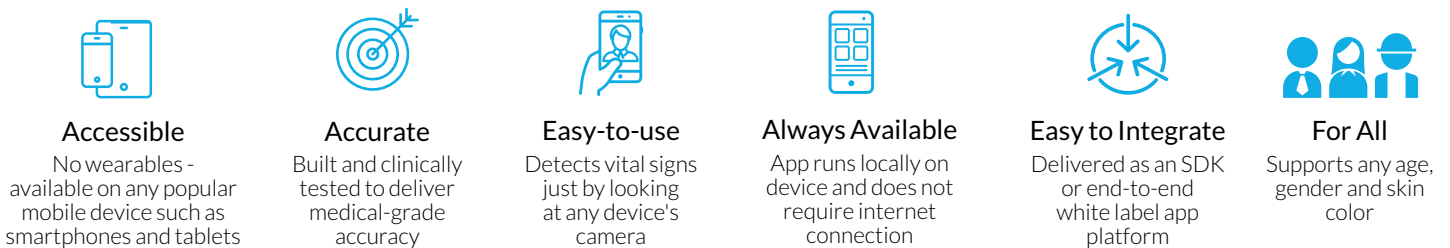
How It Works

Binah.ai's solution applies a unique mix of signal processing and AI technologies, combined with a proprietary mathematical back-end to analyze a video taken from the upper cheek skin region of the face (no video of the eyes is required). It extracts vital signs within 10 seconds to 2 minutes, with medical-grade accuracy. It applies motion compensation and illumination normalization, and supports any age, gender and skin color. The vital signs extraction is based on a remote photoplethysmography (rPPG) signal using a unique, superior methodology. Binah.ai's stress level measurement is based on Baevsky's and US/European Index level measurements (globally approved). Each use case relies on peer-reviewed medical research, and is based on the ability to retrieve continuous, accurate rPPG measurements using video feeds in real time.

Estimation of the heart rate with video consists of the following steps:



Why Binah.ai?



Recent Market Recognition



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