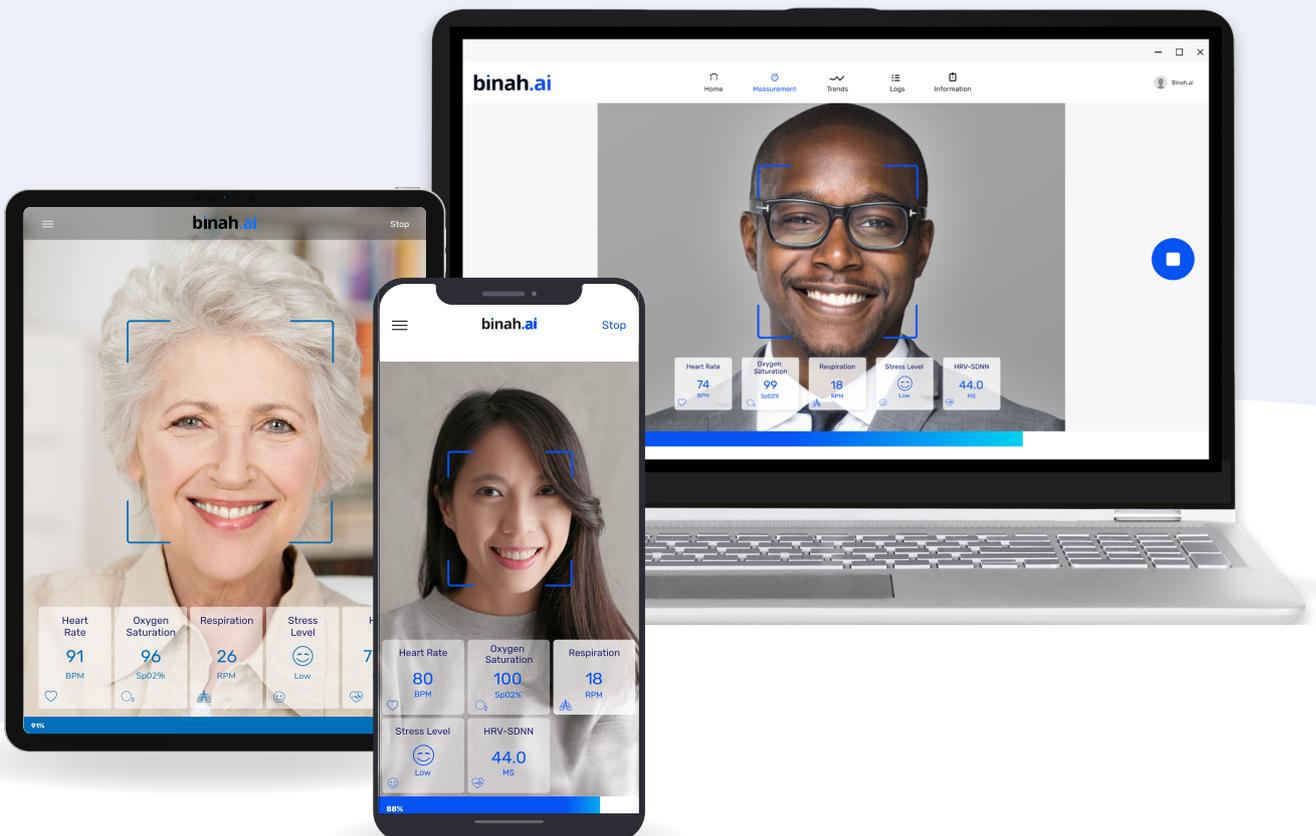


Boosting the Insurance Industry with Binah.ai's AI-powered Video-Based Health and Wellness Monitoring



The Need

In the new world of connected insurance, executives expect the insurance industry to be digitally transformed within a few short years. Digital solutions and big data are already allowing insurers to better assess risks, lower operation costs, enhance claim management, and improve customer service.

Customer expectations are also driving the transformation. Today's customers won't wait to speak to an agent or get a check in the mail—they want the entire insurance experience to be completed from the palm of their hands.

Although many elements of the insurance industry have already been digitalized, health assessment and monitoring are lagging behind, and most insurance providers still depend on in-person exams conducted by health professionals. In order to create an integrated, digital customer experience, leverage the drive to digitization, and make data-driven decisions, insurance providers need location-agnostic, digitized health monitoring solution.

Better Risk Assessment, Healthier and Happier Customers

Binah.ai allows any smartphone or laptop to become a health and wellness assessment tool with its AI-powered, video-based vital signs monitoring technology. Simply by looking at the device's camera, users can gather vital signs like heart rate, heart rate variability, oxygen saturation, respiration rate, mental stress and soon blood pressure and more.

Insurance providers can use Binah.ai to:

- Enhance customer experience
- Improve risk assessment
- Reduce operational costs
- Expand the customer pool
- Support customer health
- Boost digital transformation

"With this new digital solution, we put advanced analytics and Artificial Intelligence to the service of our customers, in a way that is affordable, fast, and easy. A new tool to promote prevention, which, as we learnt during the current Covid emergency, is of paramount importance, and to protect our customer's life and health."

Giovanni Liverani, CEO of Generali Deutschland



Transform Any Camera-equipped Device into a Vital Signs Monitoring Tool

Binah.ai's award-winning solution offers its customers an unparalleled advantage by transforming any camera-equipped device (smartphone, tablet, laptop) into a health and wellness monitoring solution. Either remotely or on-premises, Binah.ai's video-based solutions remove the need for wearables and allow users to extract vital signs measurements, with medical-grade accuracy, just by looking into the device's camera:



Heart Rate



Oxygen Saturation



Respiration Rate



Mental Stress Level



Heart Rate Variability



Blood Pressure (Coming Soon)

How Binah.ai's Technology 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 signal taken from the upper cheek skin region of the face. 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 or PPG signal (using the touch of a finger on the device's back camera for challenging environmental conditions). Binah.ai's stress level measurement is based on Baevsky's and US/European Index level measurements (globally approved).

Light Analysis

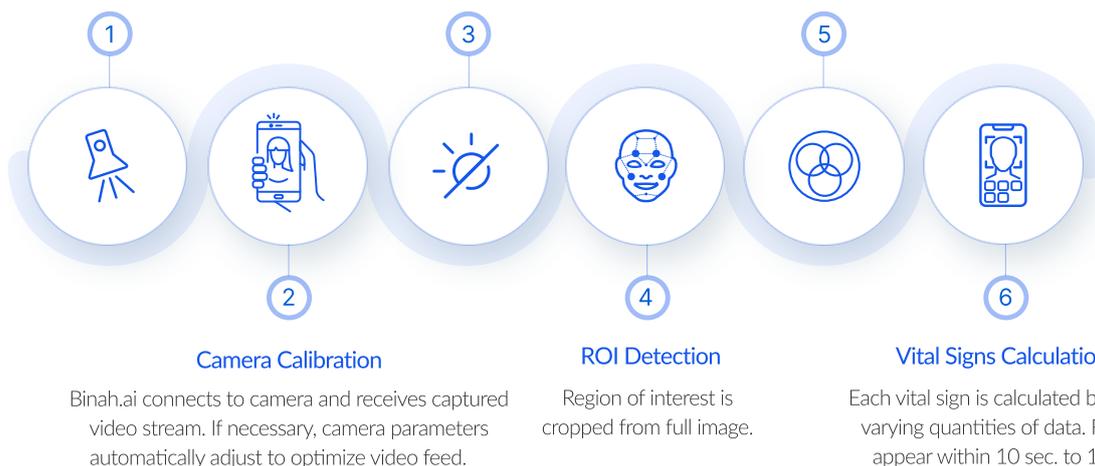
Light from surrounding environment or device torch penetrates the skin and reflects off blood vessels to camera.

Luminance Correction

When required, light levels are processed to improve vital signs accuracy.

RGB Data Extraction

Skin detection is performed on each ROI followed by extraction of RGB (red, green, blue values).



Camera Calibration

Binah.ai connects to camera and receives captured video stream. If necessary, camera parameters automatically adjust to optimize video feed.

ROI Detection

Region of interest is cropped from full image.

Vital Signs Calculations

Each vital sign is calculated based on varying quantities of data. Results appear within 10 sec. to 1 min.

Delivery

Binah SDK (Software Development Kit)

- Easily integrate Binah.ai's technology into your own app or infrastructure.
- Available for: iPhone (8 and up) and Android smartphones, Windows 10 laptops and desktops. iPad (6th generation and up). Support for Android tablets available in 2021.

Binah Team - Ready-to-use Health and Wellness Monitoring Solution

- Includes a SaaS-based management platform and end-user application.
- Immediately available on a per-user model, no integration needed.
- Available for: iPhone (8 and up) and Android smartphones, Windows 10 laptops and desktops.



Insurance Applications



Underwriting/ Onboarding

Enhance self-reporting health questionnaires with real-time, objective health data, collected remotely



Dynamic Underwriting

Manage risk better with regular, hassle-free, real-time insight into your clients' health status



Wellness Programs

Support customer wellbeing with a real-time monitoring solution, accessible 24/7



Telehealth and Remote Patient Monitoring

Help medical services providers reach out to more patients and enhance the efficiency of their telehealth services



Know Your Customer (KYC)

Get a 360° user profile with critical health data for better, more efficient, and value-added customer support

"Binah.ai's technology provides our clients with a tool to measure key vitals and offers us alternative sources of health data to assist with early intervention and referral to our digital doctors if needed."

Margot Brews, Head of Health Risk Management at Momentum, South Africa.

Enhancing the STP and non-STP model

Straight-to-policy (STP) candidates aren't risk-free. With Binah.ai, it's easy to select STP candidates and accurately identify risk factors. Remote monitoring also offers a hassle-free alternative to mini-exams.

Critical health insights from vital signs

Vital Signs	Questionnaire	When needed
Blood Alcohol (coming soon)	Alcohol use	-DUI (driving while intoxicated) history -Alcohol treatment history (past ten years) -Abnormal liver function testing (past or current)
HRV	Blood pressure	Past or current treatment for high blood pressure
HRV	Cardiac (chest pain)	History of cardiac chest pain and other cardiac impairments
Mental Stress	Depression/anxiety/psychiatric conditions	Past or current treatment for depression, anxiety, or other psychiatric issues
HRV	Diabetes	Past or current treatment for diabetes
Oxygen Saturation	Respiratory/asthma/sleep apnea	Past or current treatment for non-steroid asthma, bronchitis, emphysema, pneumonia, tuberculosis, or sleep apnea
Respiration Rate	Seizure	Past or current treatment for seizures

"Patients with diabetes had lower values of heart rate variability parameters than healthy controls, and among diabetes patients those with microvascular complications had the lowest heart rate variability parameters"

"In diabetic patients decreased HRV is observed"

Selected Scenarios for Health and Wellness Check-ups

Underwriting / Onboarding



Self-reporting questionnaire

Easily accessible from any personal device, it includes objective, real-time data



Field agent assessment

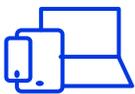
Agents can collect applicant data on their personal device and transmit it for detailed underwriter assessment

Health Scan



1 minute health test

Analysis



Advanced algorithms create individual insights



Decision Making



Providers make better decisions for each policy

Wellness Programs

Initial Health Screening



1 minute health test

Detect bodily conditions and previously unknown health issues

Help Set Personal Health Goals



Help clients with recommendations to improve general health and set measurable goals

Progress Follow Up, Plan Adaptation and Rewards



Follow up, and adjust intensity and strategy based on vital signs and progress

Goal Achievement, Maintenance and Rewards



Support clients' efforts for a healthier lifestyle or positive management of their condition

Remote, Real-time Health and Wellness Monitoring Provides Immense Benefits



Risk assessment: The user-friendly management dashboard includes historical health data and trend analysis allowing actuaries make better risk decisions.



Increased revenue: Operational costs on health personnel and logistics are dramatically reduced, and providers can upsell rewards like healthy eating, fitness equipment, and wellness services.



Access to new markets: Providers have spontaneous access to customers in remote locations without legacy devices, expensive logistics, or compromised risk management. Improved efficiency reduces insurance costs and opens the micro-insurance market.



Fraud reduction: Insurers can validate health status statements and reduce fraud.



Future-focused approach: Binah.ai gives providers the infrastructure to take advantage of data-driven opportunities and adapt to dynamic needs.



Customized relationships: Providers can monitor clients in real time and offer incentives and support for health improvements, including dynamic underwriting and offers.



Short time-to-market: A simple, powerful software development kit (SDK) makes it easy for insurance providers to integrate Binah.ai's vital signs monitoring solution into their existing branding, apps, and infrastructure for seamless functionality. It can be set up within days for immediate savings.



Customer convenience: For end-users, extracting vital signs is easier than taking a selfie. Customers can navigate the onboarding process from the comfort of their home—no inconvenient appointments necessary.



Safeguard user health: Extract vital signs related to leading causes of death such as cardiovascular, diabetes, respiratory and more.



Support aging in place: Connect to the trend towards smart homes and technology for the elderly and enable older citizens to obtain the best possible protection and prevention in the comfort of their homes.

Health. Care. Anywhere.

Powering Applications that Shape the Future of Health and Wellness

Binah.ai's award-winning technology delivers on the company's vision and mission to allow for basic and universally accessible health and wellness services for everyone, anytime, anywhere. We are shaping the future of healthcare and wellness by transforming any smartphone, tablet or laptop into a vital signs monitoring tool. Binah.ai's technology has countless use cases that span fields including telemedicine, remote patient monitoring, primary care, personal and corporate wellness, preventive medicine, virtual trials, nursing homes, insurance and many more. Our technology is used by leading global organizations that understand that the latest technologies and connected services are the roadmap to personalized, streamlined, and universally accessible health services, empowering both organizations and personal users alike.

For more information on Binah.ai, please visit: www.binah.ai or write to us at info@binah.ai

Industries We Empower



Digital
Healthcare



Wellness



Insurance



Automotive



Consumer
Electronics



Mobile

Selected Customers



Recent Market Recognition



CES
Innovation Awards
2020



Juniper Research
Platinum Winner



DOMAIN CHAMPION
NTT Data
10th Open Innovation
International Contest 2020



GRAND CHAMPION
NTT Data
10th Open Innovation
International Contest 2020



Gartner Cool Vendor
in AI Core
Technologies 2019

Why Binah.ai?



Accessible

No wearables needed -
available on smartphones,
tablets and laptops.



No Integration Needed

Delivered as an end-to-end
application platform, ready to use
within minutes.



Easy-to-use

Detects vital signs just by
looking at any
device's camera.



For All

Agnostic to age,
gender and
skin color.



Proven

In use with tens of millions of
end-users in the insurance, healthcare
and wellness industries.



Always Available

App runs locally on device
and does not require internet
connection.



No Privacy Concerns

Binah.ai does not save images or video
streams. Final measurement results are
secured and encrypted.