

Boosting the Insurance Industry with the #1 Health and Wellness Check Software



Empowering better decisions at lower costs with real-time health data

www.binah.ai



Power Your Offering with the #1 Software for Health and Wellness Checks

Binah.ai's award-winning Health Data Platform offers insurers an unparalleled advantage by transforming smartphones, tablets and laptops into health and wellness monitoring tools. Using Binah.ai's Al-powered, software-only solution, insurers can remotely measure an extensive range of biomarkers and **revolutionary bloodless blood tests** with client agreement.

Biomarkers include: blood pressure, heart rate, heart rate variability (HRV SDNN and RRI raw data), oxygen saturation, breathing rate, sympathetic stress, parasympathetic activity and pulse-respiration quotient (PRQ). Blood tests* include Hemoglobin, Hemoglobin A1C, Cholesterol total (*blood tests are currently under research).

Strong Scientific Background

Binah.ai's technology has undergone rigorous testing in the lab and by third parties. Measurements are real measurements and are not based on a statistical predictive model. For more details on the rigorous testing of Binah.ai's technology, visit our research page.

Binah Wellness Score

Enable clients to get one simple score that reflects general wellness levels in just 60 seconds. The wellness score is based on the biomarkers measured by Binah.ai.

Differentiate Your Customer Experience

Evolving customer expectations are transforming the insurance industry. Today's customers want the entire insurance experience to be completed from the palm of their hands and they want it personalized to suit their needs. Binah.ai helps insurers meet their clients' needs for digitally-enabled, faster, cheaper and personalized services. Using Binah.ai, insurers can empower clients to measure and share biomarkers in real time and help them stay on top of their general wellbeing.

Make Underwriting More Efficient with Real-time Health Data

Reduce reliance on outdated legacy datasets and make underwriting faster, cheaper, and more efficient. Our remote vital signs and stress monitoring technology reduces the need for dedicated hardware and cuts costs on medical equipment and personnel, allowing for faster, cheaper general health and wellness checks. Use remote checks to triage STP applicants, improve dynamic underwriting and gain real-time insights into applicant or client health status.

Shift from Claims Payer to Lifelong Wellness Partner

Help your clients stay engaged on their wellness journeys. Empower them to conveniently measure their health data on the go, during exercise, or even while asleep, and enable them to track their progress from their smartphones, tablets, or laptops. Use insights shared by clients to gamify wellness platforms, deliver personalized suggestions and rewards, and pave the way to a lifelong relationship with clients by helping them mitigate health risks so that they can enjoy lower premium prices.

Biomarkers You Can Measure Using Binah.ai's Technology



How Binah.ai's Technology Works

Delivered as a software development kit (SDK), Binah.ai's technology employs advanced AI and deep learning algorithms to extract various health measurements using Photoplethysmography (PPG) within 30-60 seconds. Our technology combines computer vision, signal processing, and machine learning techniques to analyze PPG signals and extract biomarker measurements. The technology supports contactless spot checks through camera-based devices like smartphones or smart mirrors, and continuous checks through contact-based PPG sensors.

For contactless spot checks, Binah.ai uses remote PPG (rPPG), a camera-based technique that has been proven to be as accurate as traditional PPG devices and enables photoplethysmography to be done using light in the surrounding environment. For contact-based, continuous checks, Binah SDK captures, analyzes and delivers biomarkers measurements using a PPG signal transmitted via Bluetooth[®] from wearable sensors. The technology supports any skin color and sex. Binah.ai's stress measurements are calculated based on the Baevsky Stress Index.



1. PPG Signal Generation: Binah.ai generates a PPG signal by capturing video input or receives PPG signals from an external sensor.

Signal Processing: The PPG signal undergoes a noise reduction process, effectively eliminating various types of noise in each frame (e.g., background, movement, light variations, etc.) and optimizing the signal-to-noise ratio (SNR). This step is essential to ensure the reliability of the subsequent analysis.
Vital Signs and Biomarkers Computation: The processed signal is input into Binah.ai's unique combinations of models and mathematical algorithms. Each combination is designed to process a specific vital sign or biomarker.
Results Delivery: The final measurements are delivered to the application. Binah.ai has no access to the measurements, and the SDK does not keep a record of the data or results once the results are delivered.

External sensors can be used for continuous monitoring. Binah.ai has developed an application that customers may use to send continuous results to their own cloud. Binah.ai has no access to the continuous results.

Unique Edge Architechture

Binah.ai's software harnesses the power of edge computing, saving you money on cloud costs and enabling stable performance throughout. In compliance with GDPR requirements, Binah.ai does not have access to the end user's data.

Delivery

Binah SDK (Software Development Kit)

- Supports: iPhone (8 and up), iPad (6th Gen and all iPad models released afterwards); Android 8.1 mobile devices; Windows 10 laptops and desktops
- Web Application Support: compatible with Safari on iOS and Google Chrome on Android no app needed
- Support for landscape and portrait orientations
- Available through web application clients no app download needed

Binah Check - Ready-to-use Health and Wellness Monitoring App

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







Underwriting/ Onboarding

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



Triage STP and non-STP Applicants

Use remote, one-minute health and wellness checks to triage high and low-risk applicants

Insurance Applications



Improve risk management with hassle-free, real-time insight into your clients' health status



Boost engagement and support client wellbeing with a real-time monitoring solution, available 24/7



Make claims smarter and faster with historic health data shared by clients



Know Your Customer (KYC)

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

Critical Health Risk Insights

Parameter	Normal range (Age 18+)	Health issues associated with abnormal levels
Blood pressure	Systolic: <120	Heart attack, heart disease, stroke, kidney disease, poor cognitive function, dementia
The pressure of circulating blood against artery walls	Diastolic: <80	
Heart rate / Pulse rate	60-100 bpm Stro	Stroke, heart failure
How many times a person's heart beats per minute		
Heart Rate Variability (HRV)	SDNN: > 50ms	Stress, risk of cardiac events, oncoming sickness, nutrition and sleep patterns
The variance in time between heart beats represented by SDNN		
Oxygen saturation		
The amount of oxygen-carrying hemoglobin in the blood relative to the amount of hemoglobin not carrying oxygen	95% - 100%	Heart disease, interstitial lung disease, COPD, anemia, ARDS, pneumonia, sleep apnea
Breathing rate	12-20 bpm	Anxiety, fever, heart problems, respiratory conditions, including COPD, asthma, and pneumonia
The number of breaths a person takes per minute*		
Pulse-Respiration Quotient (PRQ)		
Heart rate divided by respiration rate, captures the complex state of cardio-respiratory interactions	5	Hyperventilation, cardiorespiratory issues

Sources

https://www.mayoclinic.org/diseases-conditions/high-blood-pressure/symptoms-causes/syc-20373410

https://www.ahajournals.org/doi/full/10.1161/01.cir.94.11.2850

https://www.hopkinsmedicine.org/health/conditions-and-diseases/vital-signs-body-temperature-pulse-rate-respiration-rate-blood-pressure and the second seco

 $https://pubmed.ncbi.nlm.nih.gov/31647303/\#: \sim: text = Abstract, complex \%20 state \%20 of \%20 cardiores piratory \%20 interactions \%20 of \%20 cardiores piratory \%20 interactions \%20 of \%20 cardiores piratory \%20 cardior$



Enable Seamless Health and Wellness Checks





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



More Engaging Wellness Programs: Boost gamification and personalization using a real-time wellness score.



Make Wellness Rewarding: Boost rewards programs and dynamic underwriting by using real-time health data shared by clients to incentivize wellness goals.



Enhanced Risk Assessment: Use real-time and historical health data and trends to make more informed risk assessments.



Reduced costs: Save money and time on manual health assessments, expensive logistics, equipment, and outdated legacy datasets.



Increased revenues: Expand outreach to under-served populations and remote locations.



Fraud reduction and claims validation: Validate claims and reduce fraud using real-time and historical health data.



Digital transformation: Streamline underwriting and claims with automation and support a 360-view of customers for enhanced digital experiences.



Short time-to-market: Seamlessly integrate Binah SDK into insurance branding, apps, or web applications within days for immediate savings.



Customer convenience: For end-users, measuring and sharing health data is easier than taking a selfie. Customers can easily navigate insurance processes from the comfort of their own home with less paperwork and fewer calls.



Support ageing 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 from the comfort of their homes.



Customer Stories

GENERALI Generali Deutschland, the German business unit of Europe's largest insurance Group

In today's challenging landscape, Generali has a clear vision – future-focused and looking for continuous innovation, while always putting the customer first. Recognizing that health awareness is at an all-time high due to the pandemic, and with a drive to support its own customers in monitoring health status, Generali wanted to create a wellness application from scratch. The insurance giant wanted to align this solution with the nationwide push from the German government for an increasingly digitalized healthcare system.

"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



momentum Momentum, one of South Africa's largest insurance companies

As a leading insurance company, Momentum has a broad vision to digitalize its value chain, and provide clients with intelligent, streamlined tools to monitor health vitals, improve insurance services, and early identify health flags, while getting better, real-insights into their clients' healthcare status. Momentum immediately recognized the potential of remote, video-based vital signs monitoring for their clients. This would provide a valuable stream of health data to them as a company, as well as offer customers and partners the tools to stay on top of their own health vitals and attain peace of mind.

"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



SOMPO ホールディングス

Sompo Japan Nipponkoa Himawari Life Insurance, one of Japan's largest insurance companies

"In particular, we aim to develop new healthcare services which enable customers to understand their own health status (such as stress) and get advice, by utilizing Binah's technology: data format-agnostic / signal processing / machine learning, and proprietary algorithms with existing medical / and health data. Binah.ai provides practical answers to critical information challenges, accelerating the path from data to insights. Binah's combination of signal processing, machine learning, and a proprietary, comprehensive back-end AI framework delivers best-in-class models in terms of accuracy, performance and stability."

Sompo Japan Nipponkoa Himawari Life Insurance

https://www.sompo-hd.com/~/media/hd/en/files/news/2020/e_20201009_2.pdf





Health Checks Anywhere

Binah.ai's software-only, video-based Health Data platform is the next stage in the evolution of health and wellness monitoring. By reducing the need for dedicated hardware and transforming smartphones, tablets and laptops into health and wellness monitoring tools, Binah.ai is enabling insurance, healthcare and wellness industries worldwide to measure an extensive range of biomarkers just by having users look into their device's camera. Delivering on its vision and mission to support Health Checks Anywhere, Binah.ai is making access to user-provided health data fast, simple and affordable and empowering organizations to provide quality, personalized care and services at lower costs.

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

Industries We Empower

