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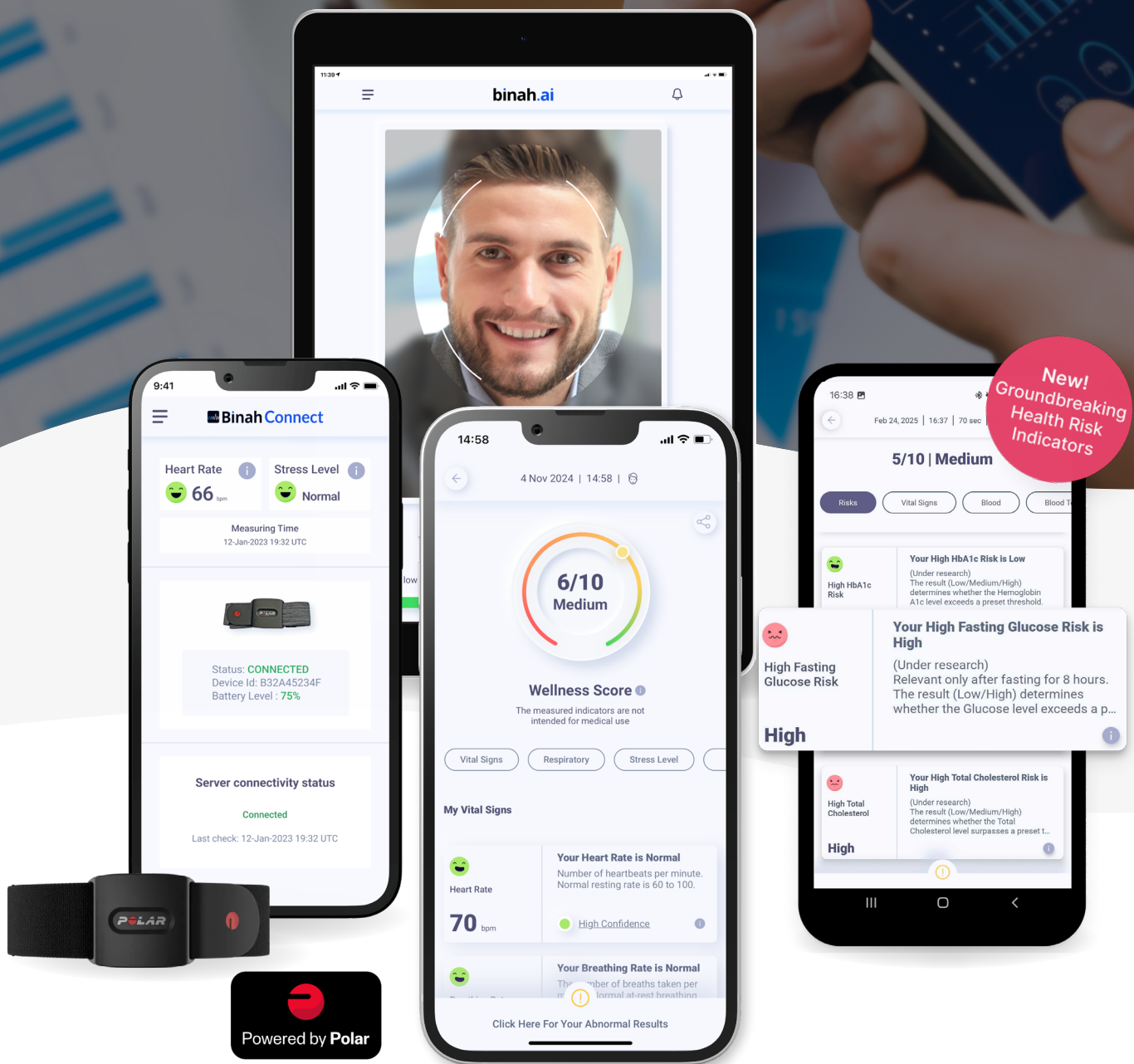

Empowering better decisions at lower costs with real-time health data

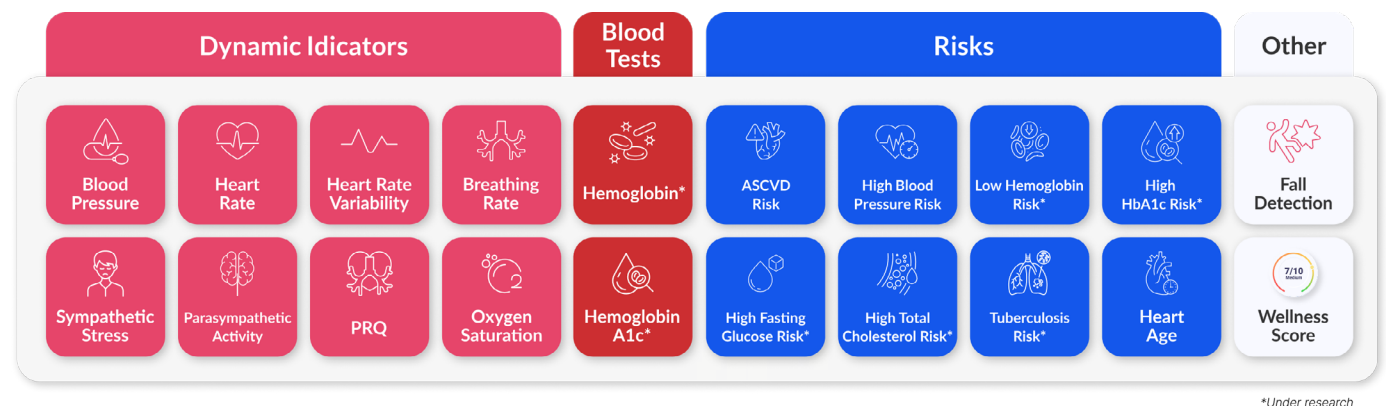## Power Your Offering with the #1 Software for Health and Wellness Checks

Binah.ai's AI-powered Health Data Platform offers insurers an unparalleled advantage by transforming smartphones and tablets into health and wellness monitoring tools. Our software-based solution empowers insurers to unveil hidden health risks and remotely measure a comprehensive range of health and wellness indicators, including our groundbreaking health risk indicators and revolutionary bloodless blood tests. By opting to share their health data, policyholders can enjoy better, faster, and more personalized health and wellness services.

Make Underwriting More Efficient with Real-time Health Data

Move beyond outdated legacy datasets and lengthy questionnaires and implement faster, smarter, and more cost-effective underwriting. Binah.ai's remote health check technology minimizes the need for dedicated hardware, cutting costs on equipment and personnel. Use remote checks to streamline operations, reduce reliance on questionnaires, triage STP applicants, uncover hidden health risks, improve dynamic underwriting and gain real-time insights into applicant health status.

Uncover Hidden Risks and Drive Proactive Prevention

Hidden health risks can lead to unexpected claims and higher costs for insurers. Binah.ai's health and wellness checks enable insurers and policyholders to proactively identify and address these risks. By allowing policyholders to measure and share real-time health data—including risks for chronic conditions like hypertension and diabetes—insurers gain deeper insights for timely prevention strategies that enhance policyholders' wellbeing and reduce long-term costs.

Dynamic Idicators				Blood Tests	Risks				Other
Blood Pressure	Heart Rate	Heart Rate Variability	Breathing Rate	Hemoglobin*	ASCVD Risk	High Blood Pressure Risk	Low Hemoglobin Risk*	High HbA1c Risk*	Fall Detection
Sympathetic Stress	Parasympathetic Activity	PRQ	Oxygen Saturation	Hemoglobin A1c*	High Fasting Glucose Risk*	High Total Cholesterol Risk*	Tuberculosis Risk*	Heart Age	Wellness Score

*Under research

Shift from Claims Payer to Lifelong Wellness Partner

Keep your clients engaged on their wellness journeys by empowering them to conveniently track their health data anytime, whether on the go, during exercise, or even while asleep. With easy access via smartphones or tablets, clients can monitor their progress seamlessly. Leverage these insights to gamify wellness platforms, offer personalized recommendations, and reward healthy behavior. Build lasting relationships by helping clients mitigate health risks, ultimately leading to improved wellbeing and savings on premiums.

Boost Wellness Program Engagement with the Binah Wellness Score

Empower your clients to get a user-friendly score designed to foster a proactive approach to health and wellness management. This score, based on Binah.ai's analysis of key metrics, serves as a tangible indicator of their overall wellness, encouraging users to track progress and engage more actively with their health.

How Binah.ai's Technology Works

Our technology harnesses a unique technological mix of signal processing, advanced AI, and a proprietary set of algorithms developed and perfected in-house over nearly a decade to conduct health and wellness checks. The health and wellness indicators are measured using photoplethysmography (PPG), a well-established, non-invasive optical technique used for measuring physiological health parameters. Stress levels are calculated using the Baevsky Stress Index. Delivering consistent, high-quality results in under a minute, Binah.ai's technology supports all Fitzpatrick scale skin tones, genders, and adults over 18.

Spot Checks

With Binah SDK, organizations can empower anyone to take a health check in 35 to 60 seconds by simply looking at the camera of their personal mobile device. Binah.ai's spot checks are designed to be taken after resting for two to five minutes to stabilize vitals.

Continuous Checks

For situations requiring continuous monitoring, Binah.ai integrates with the Polar Verity Sense™ optical heart rate sensor, enabling seamless health data collection and fall detection.

Contactless Spot Checks Using Devices' Camera

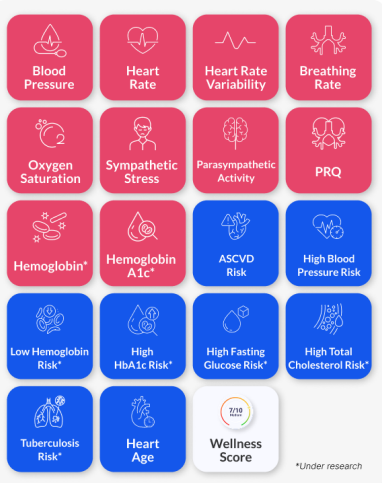After resting for 2-5 min, the user taps 'Start' and takes a **35-60-second selfie video**.

While the video is recording, Binah.ai generates a **remote photoplethysmography (rPPG) signal** from the live video.

The **rPPG signal is processed** in real time to remove noise and optimize the signal-to-noise ratio (SNR).
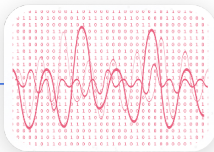
Binah.ai's **proprietary models and algorithms analyze the signal** to measure each health indicator.

Blood Pressure | Heart Rate | Heart Rate Variability | Breathing Rate | Oxygen Saturation | Sympathetic Stress | Parasympathetic Activity | PRQ | Hemoglobin* | Hemoglobin A1c* | ASCVD Risk | High Blood Pressure Risk | Low Hemoglobin Risk* | High HbA1c Risk* | High Fasting Glucose Risk* | High Total Cholesterol Risk* | Tuberculosis Risk* | Heart Age | Wellness Score

*Under research

Once the analysis is complete, the video recording stops, and **the final results are displayed** on the user's device. No images are saved, and Binah.ai does not have access to the data or results.
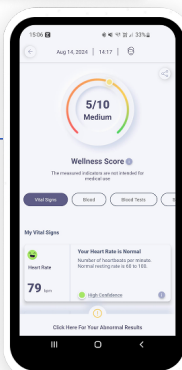
Contactless Cough Analysis Using Devices' Microphone

The user coughs into their device's microphone around 10 times, receiving real-time feedback on the cough audio volume to ensure recording quality.
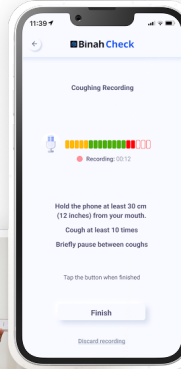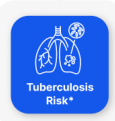
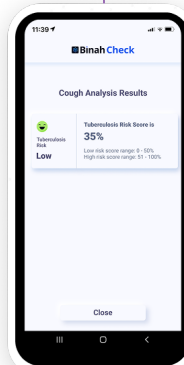Once recorded, **the audio is uploaded to the cloud** for processing.

Our advanced signal processing algorithms **filter out background noise and isolate each cough** as a separate sample.
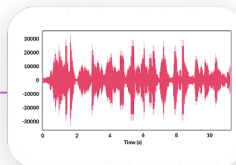
AI is then used to analyze the **cough patterns,** comparing them with spectrograms of tuberculosis (TB) patients.

Tuberculosis Risk*

The results are sent to the **application** via the SDK. Binah.ai has no access to the data or results.

*Under research

Contact-based, Continuous Checks Using Wearables

The user wears the Polar Verity Sense™ optical heart rate sensor on their arm.
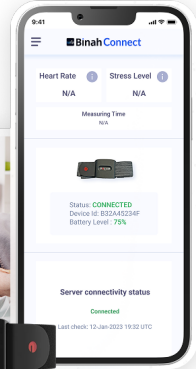
Photoplethysmography (PPG) signals are continuously transmitted to the Binah SDK via Bluetooth®.

The **PPG signal is processed** to filter out noise and enhance the signal-to-noise ratio (SNR).
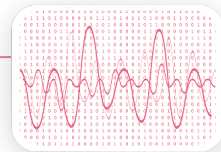
The **optimized signal is analyzed** using Binah.ai's proprietary models and algorithms to measure each health indicator.

Blood Pressure | Heart Rate | Heart Rate Variability | Breathing Rate | Sympathetic Stress | Parasympathetic Activity | PRQ | Fall Detection | Wellness Score

The **final results are sent to the customer's cloud** using the Binah Connect app. Binah.ai does not access the data or results.
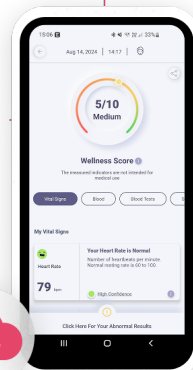
Binah.ai's customer's cloud

Why Binah.ai?

Unique Edge Architecture
Stable performance; no cloud costs or internet dependency.

Effortless Integration
Easy-to-integrate SDK for seamless setup.

Exclusively Offering Spot and Continuous Checks
Versatile health and wellness check options to meet your organization's needs.

No Privacy Concerns
GDPR-compliant. Runs on the end user's device. Binah.ai has no access to end-user data.

Widely Accessible
Available on smartphones and tablets.

Strong Scientific Background
Developed by our multidisciplinary team of experts and PhDs in medicine, physics, engineering, and more.

Real-Time Health Data
Instant, real-time results – not predictions.

Supports Equitable Access to Care
For everyone, regardless of gender, skin tone, or location.

Proven Reliability
Utilized by millions across the insurance, healthcare and wellness industries.

Aiming to Serve as a Medical Device
Pursuing FDA as a SaaMD.

Rigorously Tested
Validated in labs and third-party studies with tens of thousands of subjects.

Comprehensive Insights
Offering vital signs, health risks, stress levels, and blood tests, with more indicators coming

Optimal Delivery for Seamless Integration

Our technology is provided as an easy-to-integrate SDK (Software Development Kit), complete with comprehensive documentation, reference applications, and continuous support from our customer success team, available to assist with your needs at any time.

Binah SDK (Software Development Kit)

- Supports: iPhone XP and up, iPad 6th Gen, and all iPad models released afterward with iOS 16.7 and up; Android 10 mobile devices
- Web Application Support: compatible with Safari and Google Chrome on iOS, and Google Chrome on Android - no app needed
- Support for landscape and portrait orientations

Binah Connect - PPG Sensor Support

- Polar Verity Sense™ optical heart rate sensor
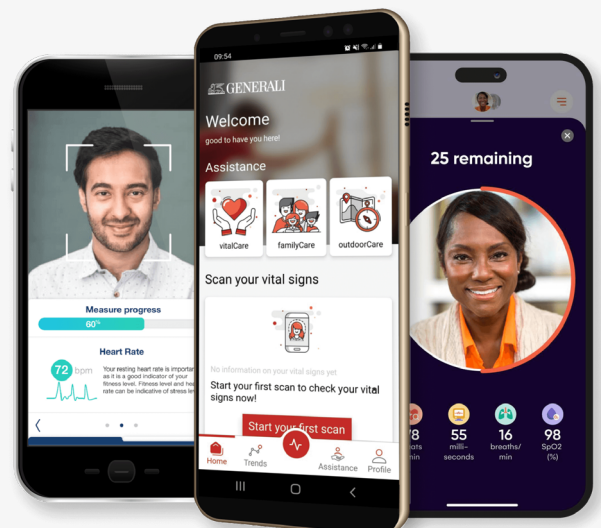
Examples of applications Powered by Binah.ai

Insurance Applications

Underwriting/Onboarding
Complement self-reported health questionnaires with objective, real-time health data, collected remotely

Risk Management
Uncover hidden risks and improve risk management with real-time insights into client health statuses

Claims Management
Make claims processing smarter and faster with historical health data shared by clients

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

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

Know Your Customer (KYC)
Get a 360º user profile with critical health data for smarter, more efficient, and value-added customer support

Flag Critical Health Risks with a Wide Range of Indicators

Parameter	Normal range (Age 18+)	Health issues associated with abnormal levels
Blood Pressure	Systolic: <120 Diastolic: <80	Heart attack, heart disease, stroke, kidney disease, poor cognitive function, dementia
Heart Rate / Pulse Rate	60-100 bpm	Stroke, heart failure, hypovolemia, fever
Heart Rate Variability	Age 20-25: 55-105 Age 60-65: 25-45	Stress, risk of cardiac events, oncoming sickness, nutrition and sleep patterns
Oxygen Saturation	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
Hemoglobin*	Men: 14 to 18 g/dL Women: 12 to 16 g/d	Anemia, sickle cell disease, chronic kidney disease, hemato-oncology disease, cancer, malnutrition
Hemoglobin A1c*	Normal: <= 5.7 % Prediabetes risk: 5.7-6.4 % Diabetes risk: > 6.4 %	Pre-diabetes, diabetes, metabolic syndrome, heart disease, kidney damage, eye damage, liver disease
Sympathetic Stress (Baevsky Stress)	Low - Normal	Stress, risk of cardiac events, oncoming sickness, nutrition and sleep patterns
Stress Response (SNS Zone)	Low - Normal	Stress, risk of cardiac events, oncoming sickness, nutrition and sleep patterns
Recovery Ability (PNS Zone)	Normal - High	Stress, risk of cardiac events, oncoming sickness, nutrition and sleep patterns
PRQ	5	Hyperventilation, cardiorespiratory issues
Tuberculosis Risk*	Low	Tuberculosis, pulmonary tuberculosis, extrapulmonary tuberculosis
High HbA1c Risk*	Low	Pre-diabetes, diabetes, metabolic syndrome, heart disease, kidney damage, eye damage, liver disease
High Fasting Glucose Risk*	Low	Diabetes, heart disease, kidney damage, eye damage, liver disease
Low Hemoglobin Risk*	Low	Anemia, blood loss, sickle cell disease, chronic kidney disease, hemato-oncology disease, cancer, malnutrition
High Blood Pressure Risk	Low	Heart attack, stroke, heart disease, kidney damage, poor cognitive function, dementia, pregnancy complications
High Total Cholesterol Risk*	Low	Atherosclerosis, heart disease, heart attack, stroke, peripheral artery disease, high blood pressure
ASCVD Risk	Below 1%	Heart disease, stroke, peripheral artery disease, aneurysm, kidney disease, diabetes
Heart Age	Heart age ≤ chronological age	Heart disease, heart attack, stroke, heart failure, peripheral artery disease, high blood pressure, high cholesterol, diabetes, obesity

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
https://pubmed.ncbi.nlm.nih.gov/31647303/#:~:text=Abstract,complex%20state%20of%20cardiorespiratory%20interactions

Enable Seamless Health and Wellness Checks

Underwriting STP / NON-STP

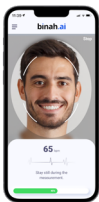### Risk Profile Assessment

Remote self-assessment

Agent enablement

Easily assess STP eligibility by sending applicants a link to perform a 1-minute scan or equipping agents with a real-time assessment tool

Instant Digital Scan

1 minute

Instantly collect objective, real-time health data to complement questionnaires, minimize churn and reduce delays.

Analysis

Generate individual insights based on real-time data

Smarter Decision Making

Automate approvals for low-risk applicants while flagging high-risk, non-STP cases for further review.

Wellness Programs

Initial Health Screening

1 minute

Send clients a link to take a 1-minute health scan or have clients scan themselves using the insurer's app

Help Set Personal Health Goals

Help clients set measurable goals to improve general health status

Boost Engagement

Help clients stay engaged with personalized recommendations based on health data and progress

Goal Achievement, Maintenance and Rewards

Reward goal achievement and health improvements, and empower clients to maintain healthy lifestyles

Revolutionize Insurance with Real-Time Health and Wellness Monitoring

Digital Transformation: Automate underwriting and claims processes. Support a 360-view of customers for an enhanced digital experience.

Operational Efficiency: Reduce the time and costs associated with manual health assessments, minimizing the need for expensive equipment and outdated datasets.

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

Smarter Digital Twins: Enrich digital twins with a wealth of high-quality real-time health and wellness data to enhance predictive analytics and personalized insurance.

Revenue Growth: Expand outreach to underserved populations and remote locations, opening up new markets and opportunities.

Fraud Reduction and Claims Validation: Utilize real-time and historical health data to authenticate claims more effectively and combat fraud.

Short Time-to-Market: Seamlessly integrate Binah SDK into your platforms, apps, or web applications.

Future-Proof Partnership: Establish a lasting partnership that continues to enhance your offering with numerous health and wellness indicators in the pipeline for the coming years.

Customer Convenience: Make measuring and sharing health data as simple as taking a selfie-video, streamlining insurance processes with less paperwork and fewer calls, and offering unparalleled convenience to both prospects and clients.

Proactive Prevention: Encourage clients to actively monitor their health data, facilitating the early detection and prevention of potential health issues.

Engaging Wellness Programs: Elevate wellness programs with gamification, personalized suggestions, and rewards based on real-time health data shared by end users. Use this data to set measurable goals and motivate clients with incentives like dynamic underwriting.

Health Checks Anywhere

Binah.ai provides the #1 AI-powered software for health and wellness checks, transforming smartphones and other camera-equipped devices into powerful health monitoring tools. Designed for healthcare, insurance, and wellness organizations, Binah.ai enables seamless, non-invasive monitoring of vital signs, health risks, stress levels, and blood tests in under a minute. With fast, simple, and affordable access to real-time health data, organizations can deliver personalized, preventive care at lower costs—accessible to anyone, anywhere, regardless of ethnicity, gender, or location.

For more information, visit www.binah.ai or contact us at info@binah.ai

Industries We Empower

Insurance Wellness Healthcare Pharma Construction Consumer Electronics/IoT Retail Nutrition Mining

Selected Partners

POLAR   accenture   endava   sdg group

Selected Customers

GENERALI   MetLife   AIA   STAR Personal & Caring Health Insurance — The Health Insurance Specialist   LiveWell By ZURICH   momentum

Certifications

ISO CERTIFIED COMPANY 13485:2016   HIPAA COMPLIANT   GDPR Representation https://prighter.com/id/17807568507 CERTIFIED ✓ 2021-04-13

Selected Market Recognition

insurance ASIA Awards — Asia Insurance Awards 2023

BINAH.AI won the #DIAAMS 2022 DIAmond Award — DIGITAL INSURANCE AGENDA — DIA DIAmond Award 2022

CES INNOVATION AWARDS 2022 HONOREE — CES Innovation Awards 2022

CES INNOVATION AWARDS 2020 HONOREE — CES Innovation Awards 2020

NTT DATA OPEN INNOVATION 2020 GRAND CHAMPION — GRAND CHAMPION NTT Data 10th Open Innovation International Contest 2020

NTT DATA OPEN INNOVATION 2020 DOMAIN CHAMPION — DOMAIN CHAMPION NTT Data 10th Open Innovation International Contest 2020