

Binah.ai SDK Datasheet



Examples of applications powered by Binah.ai SDK

Vital Signs Selfie Monitoring

While external hardware devices are commonly used to measure vital signs, our solution offers the ability to do so with devices your users already possess; whether through a smartphone or laptop, Binah.ai’s technology has got you covered. Our technology has no privacy concerns or risks, as all processing is done on the user endpoint device.

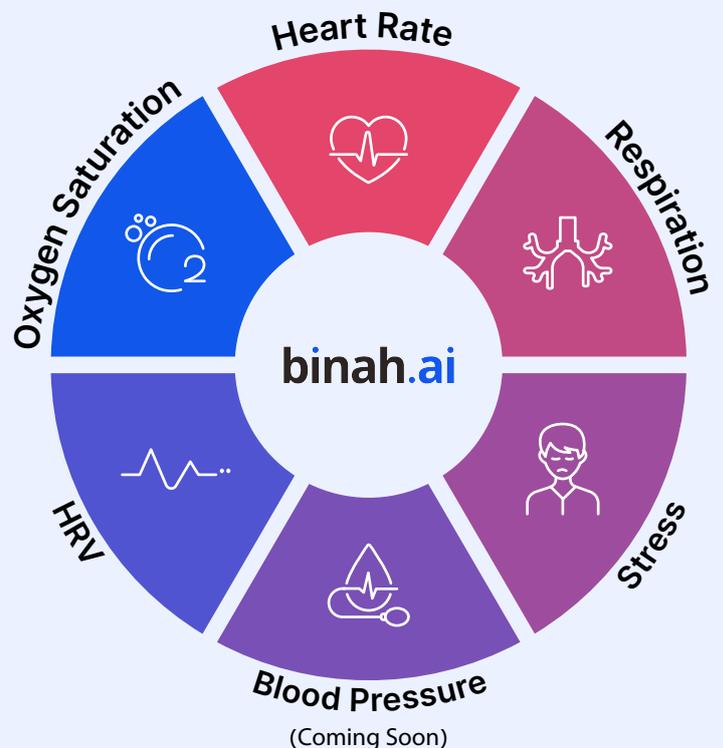
The Business Need

In today’s world, there is a growing need to measure vital signs accurately and easily. To foster a business flow that maximizes your ROI, Binah's SDK out-of-the-box offering contains all that is required to support different use cases, including one-time users on new devices, returning users and even organizational applications.

What is Binah SDK?

Binah.ai SDK is a software development kit that powers your existing application and enhances your user experience with the capacity to extract vital signs from smartphones or laptops. Within seconds, any supported device can measure vital signs by analyzing a short video feed of the user’s face via the front camera or the user’s finger via the rear camera.

Which Vitals are Measured?



Supported environments

The SDK is provided in the following framework types:

Android

- Android mobile devices with
- Android API version 27 and above
- Camera frame rate 30 fps
- CPU - ARMV8-a
- The device must have at least 3GB of RAM
- The list of supported devices is updated constantly.

iOS

- iOS devices with version 13 and above
- iPhone 8 and all devices released afterward
- iPad (6th generation) and all devices released afterward
- PPG specifically requires a torch positioned next to the rear camera.

Windows

- Windows 10 64bit, i3 processor or above
- 4GB RAM or above, using the integrated laptop camera or a USB camera with resolution 640x480.

Benefits

Vital signs results within seconds - Get your heart rate results in approximately 10 seconds and the other vitals shortly after.

Availability - Your subjects already carry the required hardware with them everywhere.

No demographic dependencies - The SDK only analyzes a video stream and does not require any demographic information. The technology works perfectly on any gender, age, and skin color, allowing you to freely create a user experience based on your specific business needs.

Various SDK Types - iOS and Android native libraries for mobile application implementation. C# library for Windows applications and Web SDK for web-based implementations.

Runs on the edge - All algorithms run on the device. No internet connection is required to measure vital signs. No personal data is sent out, and there is no privacy concern.

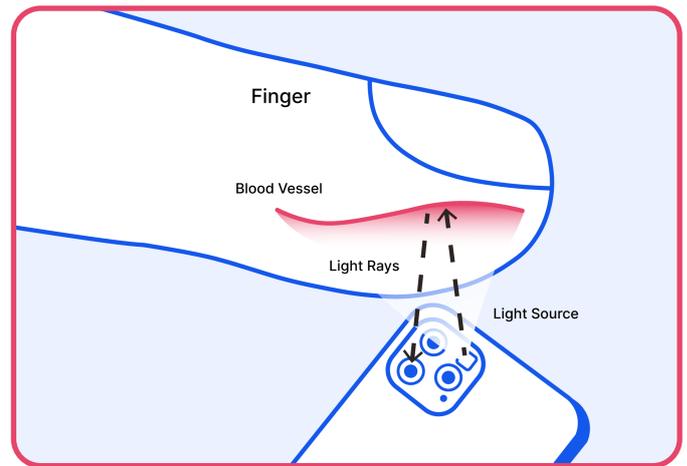
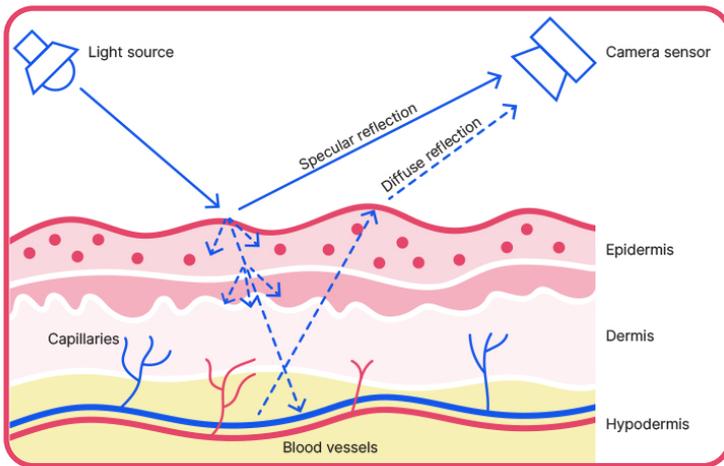
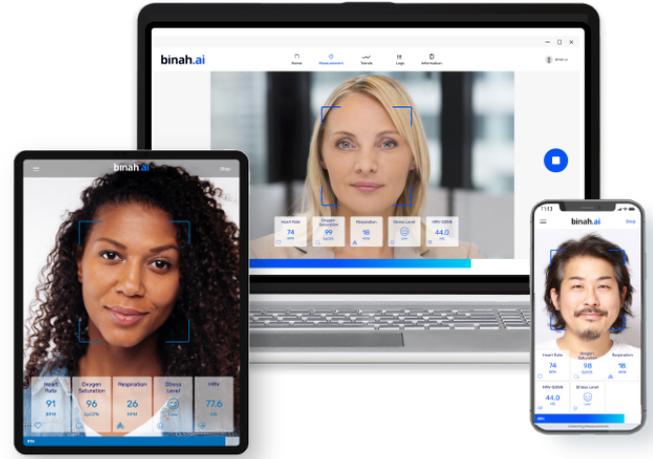
Multiple pricing models to best suit your business needs. No need for additional cloud services, hardware, or software. You can achieve cost-effective solutions that check all the boxes, even at scale.

Easy integration and 24/7 human support - Many of our customers have already managed to integrate Binah SDK on their own, in a matter of days. To ease the integration process and ensure proper use of the SDK, we provide rich documentation and reference applications. Still, our Customer Success team is here to support you every step of the way.

[Support Center](#)

The scientific baseline enabling the SDK

Binah's SDK is based on photoplethysmography and remote-photoplethysmography (PPG and rPPG, respectively). PPG is a popular solution that has been in use for years, even within medically approved devices like finger pulse oximeters, to measure changes in red, green and blue light reflected from the vessels near the skin's surface.



At Binah.ai, we took the technology one step further and enabled rPPG (remote-PPG), providing the same level of accuracy, but this time contactless. Based on the same scientific concept as PPG, rPPG enables everyday cameras to measure variations in light reflected from blood vessels without requiring contact with the skin.

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.

SIGNAL FLOW

Eager to Learn More?

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