

Getting the Travel Industry
Back on Track Through Real-time,
Video-based Vital Signs Monitoring



# Will Airlines and Hospitality take the Lion's Share of Damage from COVID-19?

The COVID-19 pandemic might well be the most significant event of our lifetime, sending the economy into global turmoil. Within this, hardly any industry has been impacted to a greater extent than airlines, hospitality and overseas travel.

Airlines are attempting to incentivize air travel with bargain basement ticket prices, flexible cancellation policies, and anything else in their arsenal – but these ideas are not real answers. Not when 93% of people are currently living in places with active travel bans.

### Changing the Way We Look at Travel and Hospitality, for Good

The beginnings of a new path are already being glimpsed in the travel, airline and hospitality industries, a way to implement solutions through health monitoring tools. These can be used to limit the spread of viruses at airports and hotels, as well as in close quarters during a flight, when staying in hotels, and when crossing borders on arrival into a new country.

To some extent, this is already happening. Emirates has become the first airline to introduce on-site rapid testing for COVID-19 to all passengers from Dubai, with blood tests done at check-in, and results available within 10 minutes. Alongside other protective measures, this is allowing the airline to continue to remain in business, without threatening the health and safety of passengers or staff.

### A Safe New World through Digital Healthcare Technology

It might seem unrealistic to think that on-site rapid testing could become the norm, but this is not the first time that air travel has gone through a major transformation. Consider what airport security was like prior to 9/11, and what it's like now. Passengers are happy to have the extra layer of security, including full body scanners where necessary, if it means that they can have peace of mind against the threats of terrorism.

Now consider a new level of protection, not for what's inside your luggage, but for what's inside your body.

But how can one know? According to the WHO, temperature checks are not enough, as 70 percent of the patients sick enough to be admitted to the hospital did not have fever.

"Temperature screening alone, at exit or entry, is not an effective way to stop international spread, since infected individuals may be in incubation period, may not express apparent symptoms early on in the course of the disease, or may dissimulate fever through the use of antipyretics; in addition, such measures require substantial investments for what may bear little benefits. It is more effective to provide prevention recommendation messages to travellers and to collect health declarations at arrival, with travellers' contact details, to allow for a proper risk assessment and a possible contact tracing of incoming travellers."

https://www.who.int/news-room/articles-detail/updated-who-recommendations-for-international-traffic-in-relation-to-covid-19-outbreak#:~:text=Temperature%20screening%20alone%2C%20at,tracing%20of%20incoming%20travellers



# Binah.ai's Solution for Airlines, Hospitality and Travel

# Priority 

# C | SEA |

# Double |

# D

1

When booking a flight or hotel, the vendor's app pops up a notification:

"Dear customer, please be aware that you will have to undergo a health scanning before being about able to check in our flight/hotel."

2

Several hours before checking in a flight/hotel, the vendor sends a message



3

## At the airport entrance kiosk:

"Dear passenger, please measure your vital signs here."

4

## At the check-in kiosk:

"Dear customer, use this link to scan your vital signs."



# When boarding the plane:

"Dear passenger, please measure your vital signs here."



6

#### At immigration desk:

"Dear passenger, please measure your vital signs here."



7

#### Checking in at the hotel:

"Dear customer, please measure your vital signs here."

### Transform Any Camera-equipped Device into a Vital Signs Monitor

Binah.ai's award-winning solution offers its customers an unparalleled advantage by transforming any camera-equipped device (smartphone, tablet, laptop, etc.) into a health and wellness monitoring solution. Either remotely or on-premise, Binah.ai's video-based solution removes the need for wearables and provides vital signs measurements with medical-grade accuracy:

Heart Rate

**Heart Rate Variability** 

**Mental Stress** Level



Oxygen Saturation

Respiration Rate



Blood Pressure\*

\*Under development

#### **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.



Face

detection





Face

tracking

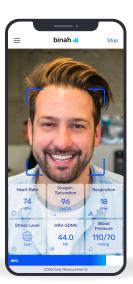
Motion compensation



Illumination normalization



Skin region of interest selection



Real-time vital signs extraction using front facing camera



Quick overview of health status in less than 2 mins



Shows clear view of health measurements trends

#### **Delivery**

Delivered as an SDK, or as an end-to-end white label platform, the technology can be easily integrated into a business' own app, or swiftly developed into a customized app of their own. By putting this easy-to-use tool in the hands of their passengers or guests, users can run a health check during online-check in, or before leaving home. Providing trend data and a history of measurements over the last 7, 14, or 21 days – it can offer businesses predictive insight into staff or guests, regarding diseases that may develop into severe cases. People who are feeling 'generally well' can better understand their state of health and make more educated decisions.

Using Binah.ai's technology, businesses can dramatically reduce the exposure of employees and customers to contagious diseases.

## **Language Support**

Currently available in the following languages: English, Arabic, Chinese, French, German, Hebrew, Indonesian, Italian, Japanese, Portuguese, Russian, Spanish. More languages available upon request.

## **Health Monitoring - Beyond the Crisis**

Adoption of this technology can allow the airline, travel and hospitality industry to be part of a digitally-enabled, healthier future. This app can prompt people to achieve and maintain better levels of wellness and healthier lifestyles as a whole. The app will soon introduce blood pressure and hemoglobin measurements, providing benefits that will continue to enhance customers and employees well-being, long after COVID-19 is forgotten.

#### **Benefits**

The travel and hospitality industries will greatly benefit from the use of the Binah.ai app, both during the current COVID-19 crisis, and following its resolution:

- Monitor staff remotely and limit the spread of a virus through employees, enabling workforce planning ahead of time.
- Allow co-workers to quarantine and protect themselves and others from infection.
- Enable business continuity by enhancing passenger and guest peace of mind when booking a trip.
- Create a safer future for travel, where digital health checks are as commonplace as x-rays for luggage.

### Al-powered Applications that Shape the Future of Healthcare and Wellness

Binah.ai's award-winning and truly groundbreaking technology delivers on our vision and mission to allow for basic and universally accessible health and wellness services for everyone, anywhere. We are helping to define and shape the future of Digital Healthcare and Wellness by providing a video-based, extremely easy-to-use and available vital signs monitoring tool, delivered with medical-grade accuracy. The Binah.ai's proven app has countless use cases that span fields such as telemedicine, remote patient monitoring, primary care, personal and corporate wellness, preventive medicine, virtual trials, nursing homes, insurance, in-car wellness and many more. Binah.ai delivers these capabilities, built by our unique team of mathematicians, physicists and biotechnology PhDs, directly to the doorstep of future-focused companies. These modern, innovative companies understand that the latest technologies and connected services are the roadmap to personalized, streamlined, and universally accessible health services, that empower both organizations as well as personal users.

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

## **Industries We Empower**



Digital Healthcare



Wellness



Insurance



Automotive



Mobile

### **Recent Market Recognition**



CES Innovation Awards 2020 Honoree



Gartner Cool Vendor in Al Core Technologies 2019



GRAND CHAMPION NTT Data 10th Open Innovation International Contest 2020



DOMAIN CHAMPION NTT Data 10th Open Innovation International Contest 2020

## Why Binah.ai?



#### Accessible

No wearables available on any popular mobile device such as smartphones and tablets



#### Accurate

Built and clinically tested to deliver medical-grade accuracy



#### Easy-to-use

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



#### Always Available

App runs locally on device and does not require internet connection



#### Easy to Integrate

Delivered as an SDK or end-to-end white label app platform



#### For All

Supports any age, gender and skin color

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