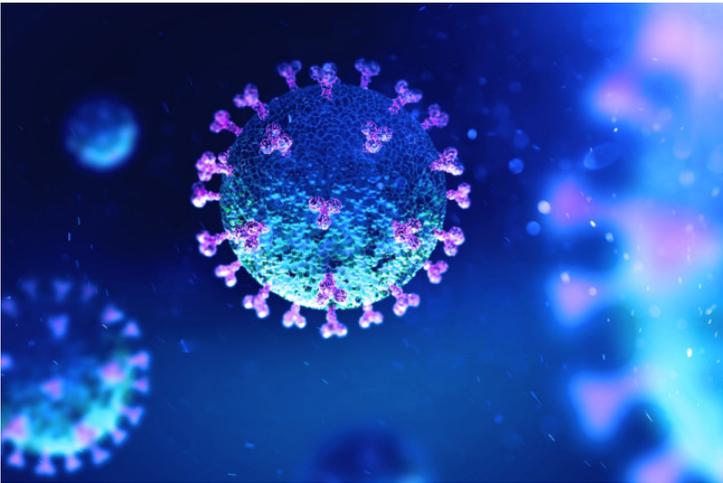# NIRAMAI offers automated fever test for COVID-19 screening

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Enhancing its patented Thermalytix technology

Recent outbreak of COVID-19 has shocked everyone. Reducing community spread through rigorous screening is the most important aspect to ease the Lockdown in the country. Bengaluru based startup NIRAMAI offers an Automated FeverTest for COVID Screening that helps identify likely infected people at the entrances of hospitals, workplaces, and public places and helps in controlling the spread. NIRAMAI's solution is aimed towards enabling automated screening of population by checking not only for fever but also for respiratory abnormalities using its Thermalytix solution (Artificial Intelligence Algorithms over thermal images).

Currently, in India, thermal screening is done using infrared forehead thermometers to measure the temperature of people in public places. This method of measuring the temperature is prone to manual errors, has the risk of cross-contamination, and does not scale for a large population. Thermal cameras have been used to measure the temperature of multiple people at once, especially in busy public areas. Remote contactless measurement effectively avoids cross-contamination, reduces the psychological impact with its non-interfering process.

NIRAMAI solution adds further AI-based analysis to make it more suitable for COVID Screening. NIRAMAI FeverTest performs face detection in the thermal stream and enables accurate measurement of the temperature of each person, counts a number of people screening, and those of which those who were found with suspected fever are isolated with snapshots of people made available to concerned security authorities. This centralized data collection enables data analysis and integration with other solutions, such as facial recognition, alarm systems and more, for effective response and tracking

NIRAMAI solution monitors the temperature of all people walking into a facility remotely using FLIR infrared cameras, who are world-renowned thermal camera vendors. On this thermal stream, NIRAMAI Computer Vision algorithms identify the faces of people and measures their temperatures to detect suspected fever.

The suspected patients can be further subjected to NIRAMAI Respiratory Rate Measurement AI-algorithm to confirm abnormal respiratory conditions before sending them to a full COVID19 diagnosis. NIRAMAI FeverTest solution is available

for standalone commercial deployment in two models – Single Person (SP) and Multi-Person (MP) check system. The solution has been pilot tested during the lockdown period at multiple corporate and government offices. It has also used for mass screening in containment zones.

NIRAMAI has also integrated its FeverTest technology in Mitra Robots from Invento Robotics. These robots can be deployed at the entrance of a hospital for screening patients and visitors. While the robot collects visitor information through a voice-based conversation, NIRAMAI solution using a thermal camera mounted on the robot measures the facial temperature of the visitor. If a visitor shows no signs of Covid-19 then the robot refers the visitor to a human receptionist. However, if something abnormal is detected, then it takes the patient to a separate room and facilitates remote interaction with the doctor. This screening can be done automatically with the remote vigilance of security staff, thus reducing the risk to health workers.