

Veda Labs has built a computer vision led platform that uses CCTV video feeds in stores to present real-time analysis as well as facial recognition, MAG (Mooc Age & Gender) classification, Customer foodfall analysis, SKU detection, CHMS (Camera Health Management System Sharma Success: Veda Labs, has raised Pre Series A round from Satin Neo Dimensions. Vedalabs plans to use the funds raised to expand its product deployment capabilities. Veda Labs has also been shortlisted by MBRDI (Mercedes Benz Research & Development Institute) to co-develop ADAS (Advanced Driver Assistance Systems) & other Computer Vision based solutions. Clients include Future Group, V Mart, PepsiCo, Royal Enfield, Lenskard Omnipresent Robotics etc. Heliware Heliware Heliware a product of SGR Labs, is suitable for a wide range of engineering and environmental applications, including: • Calculating simple backwater profiles to modelling entire catchments to mapping potential flood risk for any project site • Progress monitoring dashboard & analytics for EPC & Infrastructure projects companies like Azure Power, ReNew Power, Heliware has done simulation and designing Photo Voltaic array layouts for optimising solar power generation under varying ambient conditions, thereby increasing power generated by 35%. The algorithm establishes a geo-referenced perimeter for the captive area Based on pre-generated 3D models o aerial survey based models and performs shadow calculations on top of it to generate the PV array design and generate associated report & drawings. Heliware have done flood estimation model for Martu Suzuki's plant-based on geo-referenced elevation of the plant and superimposing the precipitation model on top of it. For NTPC & Kalpatru, SGR Labs has offered cloud based progress monitoring dashboard comprising of multistakeholder real-time project management and asset management tool.			
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A patent-pending product to ensure contactless	5	Kashware	A patent-pending product to ensure contactless

	https://www.kashware.com/ Co-Founders: Siddhant Ryan Malhotra & Amarpreet Singh	payments with any POS terminal (non-NFC based as well) similar to Samsung Pay. All the physical cards can be converted to a virtual wallet, which can be used to make the transaction. It comes in the form of a Ring based "pop socket" attached to back cover of the smartphone which can double up as a stand for the smartphone as well. RBI organised a Payments and Settlement Innovation Contest. It had multiple rounds, spanned over a quarter and hundreds of teams across India participated in the contest. Kashware was in top 3 out of the seven finalists across India including Mastercard and ToneTag. Kashware has filed a patent for contactless payments by using the magnetic coil with any PoS terminal. National Common Mobility Card certified to work across all public transports, metro etc
6	Avrio Avrio	Avrio is developing a Non-Intrusive Load Monitoring system which will allow their algorithm to predict Appliance load profile from a single device installed in the main power line without the need of appliance
https://www.avrioai.com/ Co-Founders: Puneet Batra & Ankit Chouhan	ííí∫a∨rio energ#	level sensors. The device in the main power line is installed non-intrusively through clamp-on type CTs and data is sampled at a high frequency to allow them to get the load signatures and analyse it against the inhouse dataset of load signatures to identify distinct loads Avrio Energy gives feedback to its customers on how to reduce their energy consumption. For utilities, they offer a reduction in AT&C and theft, enhanced demand response. They also provide customised energy-saving recommendations and itemised billings. Avrio's solution is helping QSR chains like WowMomo etc helps retail businesses save up to 20% on their operating costs. They're piloting with BSES Rajdhani Power Limited for residential users. Avrio also signed a Cooperation agreement with Sescom, a European
	Co-Founders: Puneet Batra & Ankit	
		facility management company for deployment of their solution. Avrio has been selected for Brinc IoT program in Poland
7	MicroGo	MicroGo has a suite of sanitisation products including GoAssure, that provides Contactless & Waterless Hand Sanitisation solution. The IoT based device assures







https://www.microgo.in/

Founder: Dr Rachna Dave

hand hygiene compliance i.e. six steps of hand hygiene and 20 secs hand rubbing and provides surveillance & analytics on hand hygiene.

The hand sanitisation solution has already been installed at several airports operated by the Airports Authority of India (AAI) including Chennai, Hyderabad, Calicut, Guwahati, Baroda, Pune and Kolkata, in addition to a host of enterprises and companies like the Taj Group, Tata Capital, BigBasket, Waycool and IRCTC. MicroGo has presented the GoAssure solution to the NITI Aayog's Empowered Group 6 Committee, chaired by Shri Amitabh Kant, CEO NITI Aayog for COVID19 associated deployment. The startup has been contacted separately by the NITI Aayog to understand their scale and possible contributions. Deployed at AAI Airports including Chennai, Hyderabad, Calicut, Guwahati, Baroda, Pune, Kolkata Won DBT Biotech Product & Process Development Award 2019 and BIG, SBIRI grant from BIRAC

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Staqu



https://www.staqu.com/

Co-Founders: Atul Rai & Summit Nayak

Staqu is a computer vision based startup having facial recognition capabilities and intelligent monitoring of objects, crowd, perimeters and vehicles. Their solution is deployed with Haryana Police, Punjab Police, Rajasthan Police, Telangana Police, Uttarakhand Police, Uttar Pradesh Police, Assam Police Dubai Police, Indian Army

During t he coronav ir u s lockdown, only the essential services were allowed to move from one place to the other. However, regulating it became a pain for the enforcement authorities, so the Government of Punjab tied up with Gurugram based Staqu to digitise the ePass issuance & verification system. The OCR & facial recognition capabilities also allowed to cut down the applicants with fake IDs thereby bringing down the manual effort by the enforcement authorities. The passes are also "colourcoded" and "letter-coded" in accordance with the government guidelines to ensure easier visibility thus maintaining social distancing norms.

Staqu has also launched a thermal camera based solution, which will alert the system if anyone is found with a body temperature above 37°C on the basis of heat signatures directly through the thermal cameras. The startup claims that the solution has a range of up to 100 meters and can identify multiple people at the

		same time. Funded by Indian Angel Network Clients included Haryana Police, Punjab Police, Rajasthan Police, Telangana Police, Uttarakhand Police, Uttar Pradesh Police & Assam Police
9	Agva Healthcare Agva H	The COVID-19 pandemic has necessitated the government authorities to ensure the availability of ICU grade ventilators. Noida-based medtech startup, which claims to build the world's cheapest portable ventilator at 1/10th the current price of ICU grade ventilators is playing a significant role in meeting the requirement. Unlike regular ventilators, these products run on room air also, can be used to provide ventilation to patients at home. It can deliver 100% FiO2 when connected to Oxygen Source. The entire ventilator can be controlled by a capacitive multitouch interface with a very simple control mechanism. It also has Apnea Detection capability with volume guaranteed backup ventilation. There are already 600 such machines currently deployed across the country, now Vaish is aiming to quickly deploy around 30,000 of them in the short run. He has held consultations with the Ministry of Health and Family Welfare regarding how Agva ventilators can be deployed and they have asked for few changes to suit the needs of COVID-19 patient Partnered with Maruti Suzuki & Bharat Electronics Limited to ramp up the ventilators production to 15,000 per month
10	Docturnal Pocturnal Simply Health http://www.docturnal.com/ Co-Founders: Arpita Singh, Rahul Pathri, Vaishnavi Reddy & Shekhar Jha	Docturnal is a point of care non-invasive screening and diagnostics startup that does Cough & respiratory sounds based TB & Pneumonia detection. Docturnal's product portfolio also includes solutions for CoPD and Asthma with a pipeline of lung based a ilments that can be identified by an aural component. One of the most critical aspects to identifying the confirmed positive COVID-19 cases, considering the paucity of COVID-19 test kits is to be able to successfully screen the suspected cases for the PCR testing. Docturnal is a product that screens the sound of a person's cough from home. However, in a clinical setting, an external microphone array is provided. The respiratory sounds along with the collated data are fed to the proprietary algorithms for TB & Pneumonia.

They're leveraging the existing data for Pneumonia & its variants to build a binary classifier for screening COVID-19 & working with ICMR to obtain labelled Acoustic & Clinical data for COVID-19.

Raised \$250,000 from IIIT-H, AIRmaker, BIRAC, Axilor and Mumbai Angels & got Uber Exchange top 10 award innovation

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AgSmartic Technologies





http://www.agsmartic.com/

Co-Founders: Rashi Verma and Abhishek Sinha

AgSmartic technologies has built Croplytics, which is a wireless soil sensor based platform that helps in irrigation management and optimizing farming inputs, leading to significant water, fertilizer, energy and labour savings. Another vertical consists of image processing based identification of crop disease & pests and giving out recommendations specific to the farm's geographic location. Current capabilities consist of crop disease & pest detection for 7 crops including tomatoes, chillies, gourds, musk-melon, watermelon and eggplant.

The Croplytics controller and app has been deployed in Punjab, Madhya Pradesh, Bihar and Delhi resulting in saving the agriculture inputs like water and electricity by 15% and 21% respectively. The continuous monitoring of the farm helped in detecting the disease in Brinjal at a very early age resulting in saving 12% loss in yield. The real time and farm based local advisory/alerts provides actionable insight to the farmers.

Raised Rs 20 lakhs via FITT - BIRAC fund and Rs 5 lakhs via MSME grant

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Vizara



http://www.vizaratech.com/

Vizara is dedicated to digitization of tangible and intangible heritage and is working with the government in creating AR-VR and 3D printing based digit a l inst a llations for monuments. Recently showcased at the International Heritage Symposium and Exhibition (IHSE) 2020In these trying times of COVID-19, Vizara is dedicated to contributing towards providing assistance in any form to our medical community, who are at the frontlines right now to help combat this disease. Vizara were asked by the Department of Science and Technology to 3D print some samples for Ventilator splitters and flow-limiters and deliver to AIIMS for testing.

	Co-Founders: Dr. Anupama Mallik, Prof. Vijay Chandru & Prof. Santanu Chaudhury	
13	VIROSAFE KHAO SAFE RAHO SAFE USE VIROSAFE https://virosafe.co.in/ Co-founders: Abhinav Saksena & Gaurav Kansal	ViroSafe, which is a UVGI (Ultraviolet Germicidal Irradiation) based device, that uses UV-C at 254nm to sterilise grocery items, food items, or any object in order to stop the transmission through surfaces. UV-C destroys a microorganism's nucleus or DNA causing cell death or making replication (cell division) impossible and also degrades simple organic material at the molecular level. Since UV-C is harmful to all organic matter including human beings, even brief exposure can result in skin irritation and/or eye irritation that could lead to serious consequences after prolonged exposure. Therefore, meticulously designed safety interlocks are used to provide the utmost in safety precautions.
14	SwitchOn SwitchOn https://switchon.io/ Co-Founder -Aniruddha Banerjee and Avra Banerjee	Founded in 2017, SwitchOn, an AI enabled industrial IoT company, helps manufacturing industries identify plant-level bottlenecks and improve equipment efficiency. They have developed an innovative solution for AI based QC Inspection for Stamping, Welding and Surface Inspection of manufactured parts in real time. SwitchOn predicts breakdowns, and quality defects in critical assets in Manufacturing plants with the help of AI-based digital twins created with the help of vibration, energy, and Image patterns.
15	Algotech Bharat Petroleum energising lives	Bharat Petroleum Corporation Limited (BPCL) approached NASSCOM CoE-IoT & AI with the problem of automating identification and counting of incoming cylinders at bottling plant. The problem was to inspect/count LPG cylinders moving on a conveyor line using ordinary CCTV cameras in real-time. After suitable curation, CoE found suitable partner who could undertake the PoC. The camera based solution consisted of differentiation and automation of counting of different types of incoming LPG cylinders. It allows counting and



differentiating 14KG (domestic) and 19KG (commercial) LPG Cylinders at the bottling plant and their automated logging. The first pilot was done at Hyderabad bottling plant and the second pilot is being done at Cherlapally bottling plant.

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Challenge by Nasscom CoE For BPCL





Startups participated

1.Nivetti systems

https://www.nivettisystems.com/

2. Payatu

https://payatu.com/

NASSCOM CoE-IoT & AI has entered into a definitive contract with Bharat Petroleum Corporation Limited (BPCL) to drive a challenge to identify the hacking possibility (both hardware and software) in the fuel dispenser unit used at the filling stations. CoE Gurugram initially shortlisted 15 companies, for the Ethical Hacking challenge. After the joint session along with the BPCL team, 6 curated innovators submitted the one pagers for their approach towards discovering the vulnerabilities. Finally, 2 teams were shortlisted to be present at the BPCL, Navi Mumbai, where they were joined by the Fuel dispenser unit manufacturer. Manish Bajpai and Aravind NA from Nivetti Systems and Arun Magesh along with Asmita Jha from Payatu visited the BPCL unit at Mumbai for 2 days. There they were joined by technical experts from BPCL and their vendor who explained them the working of the fuel dispensing unit. Subsequently the teams provided their details reports about the potential weaknesses in the fuel dispensing units. The reports are under study by BPCL team along with their partners and on the basis of their final recommendations, the cash reward upto Rs. 5 lacs shall be given to the teams. It may potentially be followed by initiating the deployments with BPCL by the shortlisted innovators which come up with solutions to plug the identified vulnerabilities.