



**AI for GOOD**

DESIGN. DEVISE. DISRUPT.

# AI for Good Compendium

Solutions that can change a BILLION lives!



Knowledge Partner



**Grant Thornton**

An instinct for growth™





## Message from **Government of Karnataka**

As part of this strategic initiative, Government of Karnataka aims to engage organizations who have the technological capabilities and solutions to impact people's lives. "The 'AI for GOOD' platform reflects the commitment of Government of Karnataka in making people's lives better through effective use of technology. We believe emerging technologies such as Artificial Intelligence will bring the benefits of innovation to make a huge positive societal impact." said

**Gaurav Gupta,**

Principal Secretary, GoK - Commerce  
and Industries, IT, Biotech, S&T



## Message from **NASSCOM**

"Artificial Intelligence has found applications across industries – Financial Services, Automotive, Healthcare, and Retail, to name a few. Importantly, the application of AI in public and governance is expanding and thus impacting every aspect of life. We are happy to partner with Government of Karnataka in its commendable strategic initiative to focus on innovations in Artificial Intelligence to bring about a positive impact on society. We believe this initiative will enable us to understand the realms of unlimited possibilities of leveraging AI for Good as well as enable innovators to build models which will enable India to be on the global map of AI." – said

**Debjani Ghosh,**

President, NASSCOM



# CoE-DSAI: Catalyzing Innovation

NASSCOM CoE is the platform for intelligence sharing and technology collaboration between stakeholders, to build collective capabilities for the industry and country in the cutting-edge areas of data science and AI. We provide HPC infrastructure, field expertise, and curated programmes to augment capabilities across academia, enterprises, government, innovators, and advanced startups.





## AI For **GOOD**

Analytics, Data Science, IoT and Artificial Intelligence have the promise of betterment of human lives. The power of Data Science & Artificial Intelligence can map poverty, deliver timely aid during natural calamities, assist with the delivery of citizen centric services in smart cities, help achieve health coverage, improve public safety and enhance the efficiency in governance among several other advantages.

NASSCOM Centre of Excellence for Data Science & Artificial Intelligence (CoE-DSAI) initiated “AI for Good” program to identify and unlock promising AI solutions to address some of the most common & complex problems in the public domain.

The AI for Good, program was a call to all innovators to demonstrate AI solutions with potential to positively impact society. The ‘AI for Good’ program was an opportunity to present their best deployed and deployable solutions which leveraged Analytics, IoT, Computer Vision, Robotics, AR, VR and Natural Language Processing (NLP) in areas of Healthcare, Agriculture, Education, Public Utilities, Safety, Smart Cities, Natural Resources, Transportation, Governance, Waste Management and much more.

The program got an overwhelming response of 200+ submissions across categories and use cases. Amongst which, top 25 AI solutions made it to the final round post two rounds of evaluation by an eminent jury team representing Government, Industry, Academia and Investment Community. After the final round of in person jury presentation, 10 were selected as TOP 10 AI FOR GOOD Impactors for their practicality, feasibility, scalability and the potential to address Indian challenges.

The jury was chaired by Mr. Gaurav Gupta, Principal Secretary – GoK – Commerce and Industries, IT, Biotech, and S&T.





## TOP 10 AI SOCIAL IMPACTORS



### Company Name



**Alndra Systems Pvt. Ltd.**

### Name of the Founders/ Key People:



**Mr. Adarsh Natarajan, CEO & Co-founder**

### About the company



Alndra systems was founded by Adarsh Natarajan with a vision to address problems of a huge magnitude using deep technology. Alndra is an AI-driven company focused on creating diagnostic solutions for fatal illnesses.

### Problem Identified



In India, despite higher prevalence of cervical cancer in the rural areas, the present screening systems are suitable only for large hospitals and labs in metro cities.

### Solution Approach



Alndra aims to provide accessible and affordable screening services for cervical cancer, the second most common cancer in Indian women, through their solution called CervAstra. Alndra's point-of-care screening system takes the screening lab to women, enabling a wider outreach of screening programmes. The system is portable and can be carried to rural or community centres, where women can be screened, and the report generated in under an hour.

### Impact



Their point-of-care screening system uses gold standard test for detecting cervical cancer, which brings reliability at an affordable price. They are able to achieve over 90% accuracy by using rigorous training of networks. CervAstra aims to contribute towards reducing mortality rates due to cervical cancer, as the disease is curable if detected early.

Affordable, 'Point-of-Care' systems to reach 5.8 billion people





### Company Name



**DataGlen Technologies**

### Name of the Founders/ Key People:



**Deva P. Seetharam, CEO**  
**Sunil Ghai, CPO**  
**Tanuja Ganu, CTO**

### About the company



DataGlen was founded in April 2015 and offers IoT and AI-based products and solutions for distributed energy systems. It has an experience in interfacing, monitoring and managing a wide variety of distributed-energy equipment including solar inverters, energy meters, string monitoring units, weather stations, diesel generators, etc. DataGlen has also developed various ML algorithms for analysing and optimising the performance of distributed energy systems. They have delivered innovative energy solutions in four different continents.

### Problem Identified



DataGlen aims to improve access to clean and cheap energy, as over 500 million people across the world lack access to electricity. Countries across the globe are working on incorporating distributed energy sources such as solar and storage into their energy portfolio.

### Solution Approach



DataGlen's AI and IoT-based distributed energy resources (DER) management platform aims to incorporate 100 GW of solar generation capacity in India by 2022. The availability of inexpensive DER, like solar energy, is revolutionising the electricity industry. However, there are various challenges posed by environmental factors, usage patterns, difficulty in managing, stability of grids, etc.

### Impact



The DER platform helps in maximising energy generation while minimising maintenance costs - for instance, cleaning of solar panels such that the total energy generation is maximised while water and labour costs are minimised. DataGlen's solution has been demonstrated to increase energy generation by 7-10%.

*DataGlen's solution has been demonstrated to increase energy generation by 7-10%*







## Company Name



EasyGov

## Name of the Founders/ Key People:



Amit Shukla, Founder

## About the company



EasyGov (Surajya Services) is a civic tech start-up that offers AI-powered digital products for improving government welfare delivery. It is an Aadhaar stack-based cloud solution, which is helping people discover their eligibility for thousands of social welfare schemes and apply for citizen centric services digitally. They aim to develop a citizen-centric information technology system and operating model to help people access all government-to-citizen schemes and services across India conveniently by 2020.

## Problem Identified



EasyGov aims to improve access and awareness about government welfare schemes, as only a fraction of the allotted budget reaches the intended beneficiaries, while the remaining funds are unutilised. High cost of delivering, uneven distribution of budget, unawareness among the citizens regarding their rights, cumbersome government process, and tiresome procedures are some of the reasons leading to gaps in welfare benefits reaching the beneficiaries

## Solution Approach



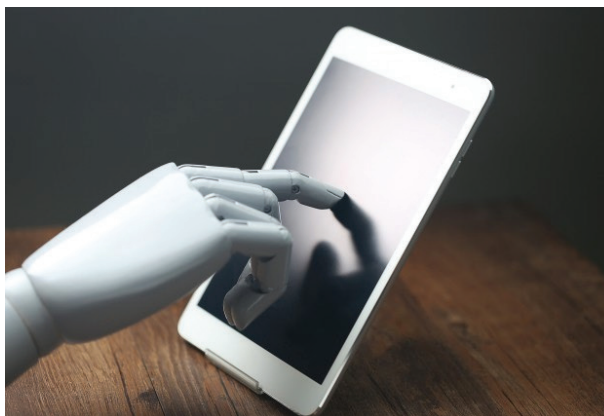
EasyGov's solution provides citizens across the country with accurate, easy-to-understand and actionable information on welfare schemes and impact-based initiatives. It helps them receive entitlements for which they are eligible with ease and dignity. An AI chatbot checks user eligibility based on real-time user input and suggests schemes and services they are eligible for. If the user is interested in any particular schemes, then he/ she can apply for the scheme by submitting the application with the help of a few clicks in a single window.

## Impact



The solution provides end-to-end scheme delivery in 12 regional languages and has reached out to approximately 10 lakh citizens in the last year.

The solution has reached out to approximately 10 lakh citizens in 2018





### Company Name



### Name of the Founders/ Key People:

- Milan Sharma**, Co-Founder
- Nishant Mishra**, Co-Founder
- Devendra Chandani**, Co-Founder
- Himani Shah**, Co-Founder

### About the company



Intello Labs is an agri-tech start-up that uses AI tools, including computer vision and deep learning, to build a platform for grading and quality monitoring of agricultural commodities. Intello Labs provides an image-based solution delivered through a smartphone app, which helps in bringing transparency and standardisation to quality assessment and reducing value risk and wastage in agriculture supply chains.

### Problem Identified



Currently, quality assaying is done manually, which makes the results subjective, time-consuming, and open to malpractices. There is a need for an easy-to-use, scalable, and reliable quality assaying system that can be used at all national mandis. Labs and machines are expensive and have limited availability, which is why it is imperative to get quality results in a digital format which can then be uploaded on the eNAM platform.

### Solution Approach



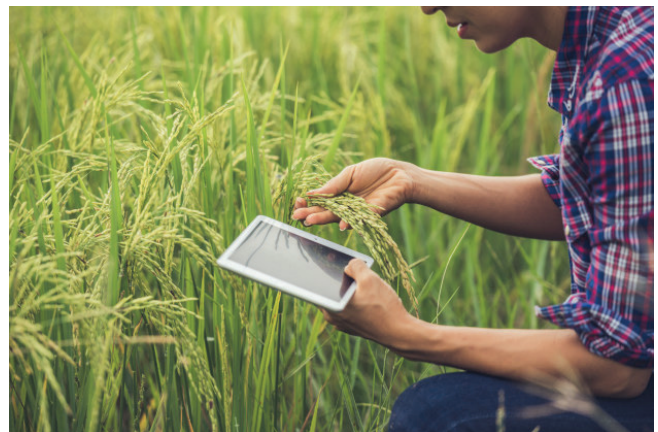
Intello Labs has developed an application that tests, grades, and analyses visual quality parameters of agricultural products. Currently, they offer services for testing and grading of wheat, tomatoes, potatoes, onions, and cardamom. They are in the process of adding six to seven more commodities to their portfolio, including coffee, tea, and grapes.

### Impact



The solution has reduced the quality testing time from 15 minutes to 2 minutes and provides quality results with more than 95% accuracy. It allows real-time data sharing across multiple locations and screens, standardises quality assessment, and removes subjectivity.

Quality testing time reduced from 15 minutes to 2 minutes



## Company Name



**Jungroo Learning**

## Name of the Founders/ Key People:



**Sethuraman T A**, CEO  
**Cibe Hariharan**, CTO

## About the Company



A B2B ed-tech SaaS platform, Jungroo Learning set out to help educational institutions and NGOs with adaptivity and personalisation in order to make their existing system intelligent and cater to the unique needs of the learner. Jungroo's product offerings include an adaptive assessment engine, an adaptive learning engine, automatic question generator, and a low-cost real-time classroom polling system.

## Problem Identified



One of the biggest challenges facing the education sector is the quality of education imparted, which leads to low-learning levels. Educational organisations are not able to precisely identify the learner, which is why learning gaps exist across various domains and grades. It is important to diagnose the needs of the learners and provide an effective solution.

## Solution Approach



Jungroo Learning identifies the learner at an atomic level and guides him/her to the required learning destination using an AI-based adaptive assessment engine. Their engine creates personalised learning journeys for each student using reinforcement learning. Based on several parameters, it calculates the engagement score at the back-end and takes the students through the shortest path to mastery, then measures the growth of a student at different points in time.

## Impact



Through automating the entire process of assessment creation, evaluation, reporting, and analysis, the solution saves resources and time for organisations. Their automatic question generator reduces the burden of creating assessments and evaluating and allows organisations to create any number of questions. Their classroom polling feature allows real assessments in classrooms, which also contributes to increased student engagement.

The classroom polling feature allows real assessments in classrooms



### Company Name



**Vinfinet Technologies Pvt. Ltd.**  
(KisanRaja)

### Name of the Founders/ Key People:



**Vijay Bhaskar Reddy Dinnepu, CEO**

### About the Company



KisanRaja is an agriculture-based start-up with the vision of building innovative and cost-effective technology products and IoT solutions for emerging economies. The company delivers cloud-based IoT solutions integrated with wireless sensors, mobile pump controllers and wireless valve controllers for smart autonomous irrigation through its flagship brand, KisanRaja.

### Problem Identified



Due to erratic power supply and wastage of scarce resources such as water and electricity resulting from adoption of auto switches, it was becoming difficult to provide irrigation to crops. Farmers faced high maintenance and overhead costs of around INR 30,000 per pump for pump damage due to erratic voltage fluctuations, motor burn, wire cut, and dry run. As a result, they started adopting auto-switch, which turns motors on as and when the power is available.

### Solution Approach



Through the adoption of the mobile motor controller, KisanRaja's solution will offer huge water savings. Here, the pumps are connected to a cloud server for monitoring the discharge of borewell to help control its operation. Pump sets can be operated remotely and can be turned off. This is known as 'Internet of Pumps', which helps farmers run them only when required and measures the amount of water that is being saved. The technology can be used with micro-irrigation systems as well.

### Impact



KisanRaja's solution contributes towards reducing the government's power subsidy bill, increasing longevity of ground water resources, and per capita income of farmers resulting from improved margins with reduction in labour, fuel, equipment maintenance, and fertiliser costs. Constant water monitoring leads to around 12-15% increase in farm productivity, which helps in saving up to 25% of power, and reduces pump maintenance costs by 30%.

*KisanRaja's solution contributes towards reducing the government's power subsidy bill*



### Company Name



**MyCrop Technologies Pvt. Ltd.**

### Name of the Founders/ Key People:



**Deepak Pareek, CEO & Co-founder**

### About the company



MyCrop is a collaborative platform which creates an ecosystem enabled by state-of-the-art technology to empower the farmers through 'farmer mitras', delivering them information, expertise, and resources. It aims to uplift the farmers' lives and better their standard of living by increasing their productivity and profitability.

### Problem Identified



Agrarian distress is increasing, as growing food crops has become unviable for small-scale farmers because of low yield, high input costs, increased risks, and unsustainable operations.

Global food security and hunger crisis have affected small-scale farmers' productivity after having led to the unavailability of quality agro inputs, poor market linkages, less or no access to credit and risk mitigation tools, and scattered information of good agricultural practices. In addition to this, agriculture ecosystem players do not have real-time insights on ground-related farming activities to deliver their services in the best possible manner.

### Solution Approach



MyCrop is a technology-enabled initiative, which aims to empower farmers by delivering intelligent insights, expertise, and resources. It endeavours to increase the farmers' profitability by increasing their yield, decreasing their cost of cultivation, and giving them better market linkages to improve their standard of living. It is a sustainable self-learning, data-driven, real-time scalable system, which also serves as a farm/farmer management solution, predictive analysis and monitoring tool, decision support system, and an agriculture e-commerce platform.

### Impact



MyCrop's solution has reached out to more than 4,000 farmers directly, with over 30 'farmer mitras' registered. Through this solution, farmers are able to reduce the cost of cultivation, increase their productivity and quality, and access the market better





### Company Name



**Netradyne**

### Name of the Founders/ Key People:



**Avneesh Agrawal**, CEO  
**David Julian**, Founder

### About the company



Netradyne is a tech company with expertise in AI, deep learning, and edge computing established to bring transformational solutions to the transportation industry. It was founded in 2015 by Avneesh Agarwal and David Julian with an aim to bring cutting-edge technology to the market with solutions that can make a meaningful impact today.

### Problem Identified



Globally, 1.25 million road accident fatalities were noted in 2013 as per WHO, with over 400 fatalities per day recorded in India as per the report released by The Ministry of Road Transport & Highways in 2016. Studies suggest reduction in driver inattention just before the accidents could drastically reduce the number of accidents.

### Solution Approach



Netradyne's efforts are focused towards reducing the number of accidents by making the roads safer through their 'computer vision-based driver' safety system called Driveri. Driveri is a driver monitoring and coaching device, and its features include multiple high-definition cameras, LTE, GPS, accelerometer, gyro, and an advanced NVIDIA processing unit with one TFLOP compute power. It is a multi-sensor integrated; cloud-connected platform designed to enhance driver safety using real-time advance driver assistance systems (ADAS) functionality.

### Impact



Netradyne's solution helps saves time, contributes to reduced financial losses, and lowers environmental impact due to accidents of commercial vehicles. In under two years of the product launch in India and the US, Netradyne has managed to secure over 130 customers.

*In India and the US, Netradyne has managed to secure over 130 customers*



### Company Name



**Tricog**

### Name of the Founders/ Key People:



**Dr. Charit Bhograj**, Founder & CEO  
**Zainul Charbiwala**, Co Founder & CTO  
**Dr. Udayan Dasgupta**, Co Founder  
**Abhinav Gujjar**, Co Founder

### About the company



Tricog was founded in 2015 with a vision of expediting cardiac diagnosis and accelerating treatment. It does this by providing accurate (physician-verified) ECG reports within a few minutes of taking ECG at remote centres. If any patient is found to be critical, Tricog works with tertiary hospitals in their neighbourhood to accelerate treatment. Tricog is also actively engaged in building a specialised product for coordinating cardiac care across primary healthcare centres, ambulances and tertiary hospitals.

### Problem Identified



Approximately 31% of deaths globally are due to cardiovascular diseases (CVD), out of which heart attacks and strokes account for 85%. In the last 26 years, there has been a 34% rise in deaths due to heart diseases in India. Three million people have died in India due to CVDs. While ECG machines are readily available in India, reading ECG, which is the first step in detecting any heart-related abnormalities, requires the skills of a cardiologist or an experienced physician since machine-embedded algorithms have only a 70% accuracy rate. There is a shortage of heart specialists in India. This results in frequent occurrences of misdiagnosis and delayed diagnosis.

### Solution Approach



Tricog's solution consists of cloud-connected ECG machines placed at various remote centres, which continuously push ECGs to the Tricog cloud. Proprietary algorithms first analyse the ECGs and provide preliminary interpretation for verification by the in-house team of cardiac specialists who are present 24x7 at Tricog's centralised ECG Analysis Hub. The physician-verified reports are then sent back via SMS/app to the remote centre.

### Impact



By providing ECG diagnosis within minutes and architecting a low-cost solution, Tricog addresses the delay in response, which significantly decreases the risk of mortality.

*Tricog addresses delay in response, thus minimising the risk of mortality*





**Company Name**



**Name of the Founders/ Key People:**



**About the company**



Voxta was set up to build speech recognition in Indian languages to help Indians access information and carry out transactions using their voice. It was launched in 2014 with IVR speech recognition initially for marketing campaigns. Voxta offers smart phone speech recognition in eight Indian languages, a configurable voice bot platform, and a distributed data collection platform to collect and process audio data.

**Problem Identified**



There is a need for cost-effective solutions for making information accessible to those who do not know English and are not fully literate in an Indian language. Voxta's solutions help companies target vernacular customers and give them better and cheaper customer service. They cut call centre costs on IVR for clients using virtual agents with speech recognition in Indian languages, and deliver a higher quality of customer service

**Solution Approach**



Voxta's solution is helping companies reach out and target a new vernacular customer base on mobile phones. Indian languages are difficult to type, and voice is more natural and easier to use. Voxta currently supports eight languages: Kannada, Hindi, Telugu, Tamil, Gujarati, Marathi, Bengali, and English. The voice services help people - who may not be fully or digitally literate - get benefits of the internet revolution by using voice to search for information or run transactions.

**Impact**



The platform can be applied to provide information about hospital services, benefits, health, education advice, career advice, or environmental issues. This implies that they can get access to vital information in healthcare, government schemes, etc., and carry out transactions online such as paying gas bill using voice - in their own language - without being dependent on a third-party.

Voxta currently supports eight languages: Kannada, Hindi, Telugu, Tamil, Gujarati, Marathi, Bengali, and English





# Next Best Innovators



## Company Name



**CropIn Technology Solutions**

## Name of the Founders/ Key People:



**Krishna Kumar**, Founder & CEO  
**Kunal Prasad**, Co-founder & COO  
**Chittaranjan Jena**, Co-founder & CTO

## About the company



CropIn was founded by Krishna Kumar, a veteran leader in Agtech with a strong technical background. In 2009, Krishna witnessed the multitude of challenges faced by farmers in India, and it was during this time that he decided to contribute to the agriculture sector. With the implementation of products like SmartFarm, SmartRisk, mWarehouse, etc, CropIn has been able to revolutionise farming by incorporating technology into daily field operation

## Problem Identified



It is a challenge to conduct Crop Cutting Experiments (CCEs) in a short span, considering there are 2.5 lakh gram panchayats in India. Moreover, there is a possibility of misjudgement of insurance decisions at a farmer level, since heterogeneity of yield is not considered in the traditional random survey method employed.

## Solution Approach



SmartFarm is a farm management solution which combs the fields for weather and field information, monitors potential risks, captures precise location and farm size, details of farmers and crop details from pre-harvest stage. SmartRisk is an AI/ML-based predictive solution, which gathers historical data on the crop in a farm during the growth cycle. Both, SmartFarm and SmartRisk ensure that the field is monitored right from the beginning of each cultivation cycle, enabling authorities to easily collect relevant data at the appropriate time and making the process of sample selection for CCE more scientific and less arbitrary.

## Impact



Both, SmartFarm and SmartRisk ensure that the field is monitored right from the beginning of each cultivation cycle, enabling authorities to easily collect relevant data at the appropriate time and making the process of sample selection for CCE more scientific and less arbitrary. The solutions provided by CropIn are developed in local languages, which also helps farmers in understanding the crops and the diseases that affect them.

SmartFarm,  
SmartRisk are  
developed in local  
languages



## Company Name



**JioVio Healthcare**

## Name of the Founders/ Key People:



**Senthil Kumar**, Co-founder

## About the company



JioVio Healthcare is a med-tech international company, which focuses on providing a seamless pregnancy, infant care, and parenting experience with its innovation in healthcare technology. SaveMom is their pioneering project, which mainly focuses on 'saving women giving birth'. Some of the other products offered by JioVio Healthcare are Allomom, Allolab, Allobaby, Allooldcare, and Alloremote.

## Problem Identified



Due to lack of access to modernised health care systems, the mortality rate of pregnant women is very high. Some of the challenges include lack of confidence of health workers to add vital data manually in a mobile application, lack of reliability of data, possibility of fake data being entered, and the inability to directly send data collected to the doctor in the cloud.

## Solution Approach



SaveMom provides timely and appropriate care during the first 1,000 days with the help of their AI-enabled IoT kit and telemedicine software. Pregnant women's activity information is collected and stored using wearable devices. This information is synced with the health worker's tablet during the visit, and it is ensured that the health worker goes on home visits. The health worker is provided with an IoT health kit, which has six IoT medical devices including BP, BG, BMI and SpO2 FHR, that collect vital parameters of pregnant women digitally and send the data over to the cloud for analytics.

## Impact



In the past 18 months, they have provided 22,856 home-based antenatal care centres and identified 382 high-risk mothers, with 1,428 mothers delivering their baby successfully. JioVio has partnered with major hospitals and two state governments for providing quality maternal care to pregnant women.

JioVio has partnerships with major hospitals and two state governments



### Company Name



Zerone Consulting Pvt. Ltd

### Name of the Founders/ Key People:



Jeyash Puthuparambil, CEO

### About the company



The company's core offerings include Cloud, Mobile, web application development and product engineering, IoT, Analytics, Cognitive Computing, Artificial Intelligence, Blockchain, Robotic Process Automation, Face Recognition, Natural Language Processing solutions. They meet the needs across verticals viz. Travel & Leisure, Logistics, Healthcare, Legal, Retail, Media & Publishing, Financial Services, Communities & Associations.

### Problem Identified

A government authority maintained a database of criminals and suspects who are prohibited from entering restricted areas, public gatherings and other sensitive premises. The purpose was to prevent any fatal harms or security breaches caused by such people in restricted territories. The government officers had to manually link all the accepted identity proofs of the captive criminals or suspects to their barred criminals record. The challenges faced included:



- Linking multiple identity proofs owned by each suspect to the barred criminals record and mapping their identification documents to the database.
- Whenever someone enters a restricted area, they had to physically carry any or all of their identification documents for official verification.
- Verification of a person's ID card at the time of seeking entry was not completely effective, since the person could easily tamper the documents that they are submitting.

### Solution Approach



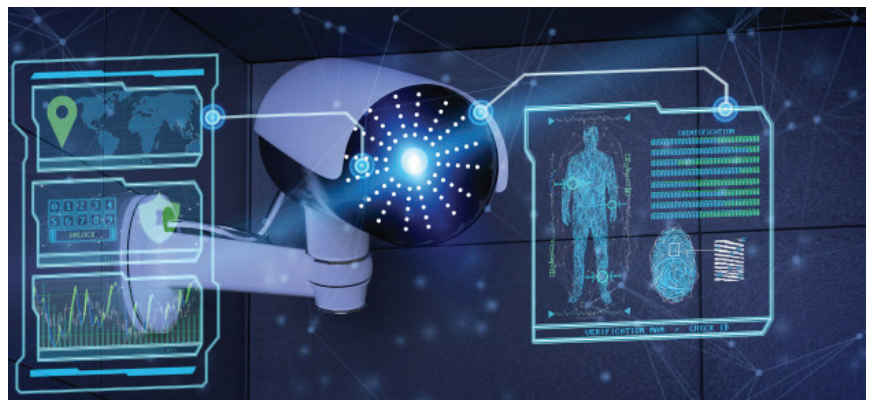
The company has developed an AI-based facial recognition solution that completely rules out the need for maintaining physical ID proofs or documents to verify an individual's identification details. This helped the customer obtain a uniform system to effectively keep track of individuals who are prohibited from entering sensitive premises. As soon as a person seeks entry to a restricted territory or to a public event, the person's face is scanned at the entrance to see if they were included in the list of individuals banned from entering such places.

### Impact



- 50% reduction in the risk of security threats
- 80% faster and accurate matching capability
- 40% cost savings through AI solution

50% reduction in the risk of security threats





## Company Name



**Skinzy Software Solutions Pvt. Ltd.**

## Name of the Founders/ Key People:



**Dr. Dhananjay Kalbande**, Co-Founder  
**Dr. Uday Khopkar**, Co-Founder

## About the company



Skinzy is a health care start-up which aims to provide affordable skincare solutions to all. It strives to cater to mostly rural and semi-urban India, where the availability of specialised dermatologists and doctors is scarce. AI-based machine learning and image processing algorithms have been Skinzy's top priority.

## Problem Identified



Some abnormality on skin triggers anxiety and affects the mental health and overall productivity. Some rural hospitals still do not have the facility of a dermatologist, compelling the citizens to travel to the nearby city for just diagnosis.

## Solution Approach



While the prevalence rate of skin diseases is quite high in the country, the availability of dermatologists is low. Moreover, rural areas further lack access to a specialised dermatologist resulting in people ignoring the perils of potentially threatening skin diseases by considering it as an ordinary occurrence.

## Impact



Skinzy, through its DermaPhoto app, is trying to reach out to people to help them detect skin diseases and connect them to a dermatologist in order to provide them with quick solutions. It does not aim to replace doctors but provide an additional tool at the disposal of doctors to help them in quick diagnosis of a disease and provide relevant medical prescriptions.



Helps people  
detect skin  
diseases and  
connect them to a  
dermatologist



## Company Name



**Tata Consultancy Services**

## Name of the Founders/ Key People:



**Rajesh Gopinathan, CEO**

## About the company



TCS offers a consulting-led, cognitive-powered, integrated portfolio of business, technology and engineering services and solutions, and has recently completed 50 years. Through its unique location independent agile delivery model, TCS is recognised as a benchmark of excellence in software development.

## Problem Identified



Along with breeding, proper livestock management and monitoring practices like pre- and post-delivery care of livestock, timely vaccination and deworming care, tailored nutrient and feed management, are also needed to boost performance. Traditional farmers use local bulls as stud for insemination, which not only degrades or corrupts the purity of female progeny, but also disrupts the performance of upcoming progeny generations, and affects milk yield. Many organisations provide scientifically-proven ways of breeding, heat detection and other best management practices of livestock.

## Solution Approach



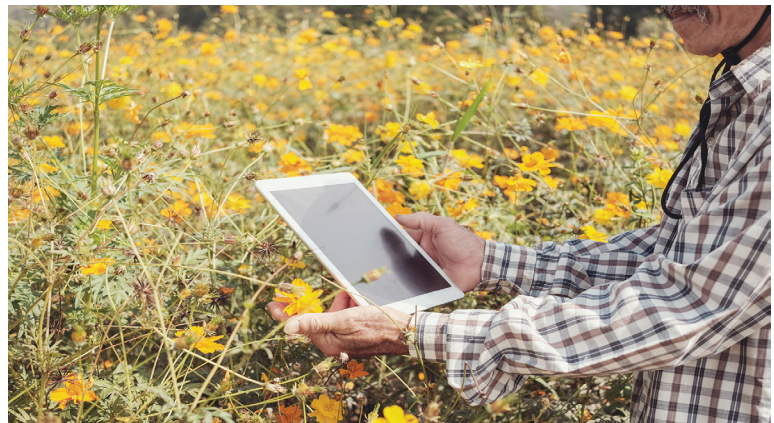
TCS's solution brings information and communication technology (ICT) to livestock through their mKRISHI platform. They have partnered with the largest livestock programme running in India for systematic breed improvement through selective artificial insemination-based cross-breeding (indigenous/exotic cattle breeds). Using ICT, TCS helps increase milk yield by identifying the best bull for insemination using 'Artificial Intelligence on Artificial Insemination'.

## Impact



TCS provides palmtop awareness on cattle care management practices, monitoring anomalies, retraining requirements, and generation of observations in real-time and an easy-to-use manner. This helps improve progeny milking performance from 2-3 litres per day to 14-16 litres per day in just five to six years. The solution contributes to increased profits and reduced hunger owing to the surplus of 12-13 litres per day.

TCS provides palmtop awareness on cattle care management practices



## Company Name



**BKC WeatherSys**

## Name of the Founders/ Key People:



**Dr. B. K. Singh.** CEO

**Dr. Jaya Singh.** Director  
Group Captain (Retd.)

**Kamal Mehrotra.** Chief Meteorologist

## About the company



BKC WeatherSys Pvt. Ltd. (formerly known as BK Consimpex Pvt. Ltd.) is one of India's first few private sector meteorology and environmental technology companies. Founded in 1989, BKC WeatherSys provides turn-key technology and service solutions for weather, power, aviation, agriculture and solar energy industries.

## Problem Identified



There is a need for authentic information on the status of crop production before they mature in order to plan for imports, exports, or buffer well ahead of shortages or surpluses.

## Solution Approach



Through the Fasal Salah app, farmers can get weather advisory in advance, which is related to the crops that they grow. This app can also act as a tool for crop insurance system, which is currently faced with challenges like delayed submission of yield data to assess damages as the system relies on thousands of crop-cutting experiments, lack of trust in the quality of such data, and delay in the payment of premium subsidy by the state governments to the insurance companies.

## Impact



The solution has resonated well with over 1 lakh farmers who are using the app to estimate yield, get information about traders, input providers, mandi prices, and receive highly personalised and hyper local weather forecasting.

The solution has resonated well with over 1 lakh farmers



## Company Name



**Sutara Learning Foundation**

## Name of the Founders/ Key People:



**Srikanth Talapadi, CEO**  
**Anupama Kolamala, Director**

## About the company



Sutara Learning Foundation was incorporated in 2014 and the organisation entered into the Global Learning XPRIZE. Their product was selected by a panel of international judges along with four others from a group of 198 solutions from across the globe. Their software was then loaded onto around 500 tablets, which were distributed in 2017 by UNESCO and WFP in around 20 villages of Tanzania to children aged 7-10 years.

## Problem Identified



The traditional classroom system is not very conducive for providing customised learning to children who have been left behind. Also, the acquisition cost of learning and knowledge from traditional sources cannot be reduced drastically. Considering the huge number of children with no access to primary schools and insufficient basic literacy and numeracy, scaling up traditional schools and effective teachers will not necessarily solve the problem.

## Solution Approach



Sutara Learning Foundation aims to improve accessibility to education through their solution called Chimple - a gamified, personalised and adaptive learning system. The system guides a child from absolutely no knowledge of the alphabet to a stage where the child can read to learn. They believe that each child, if given access to a low-cost tablet or mobile phone, can use their solution to guide themselves to learn basic literacy and numeracy. The core software is a chatbot which uses natural language processing to chat with the child. It offers games and activities to improve the child's level, and the content of the game is selected based on the child's level.

## Impact



Using low-cost mobile devices, intelligent software and gamified learning, the child can learn - in a group or alone - either under the direction of a teacher, parent, elder sibling, or by themselves. They adopt a scalable approach to help children attain foundational literacy and numeracy by encouraging children to use smart phones to acquire this knowledge.

Improved  
accessibility to  
education through  
Chimple







## Company Name



**Nexscon Labs Private Ltd**

## Name of the Founders/ Key People:



**Saif R Naik**, Founder

## About the company



Nexscon Labs was born out of the vision of making the world safe and smart by being the earth's most innovative consumer products company. Being engineers and designers at heart, they constantly innovate to build smart connected consumer products in the automotive space. They have built the world's first pollution repelling smart solution that protects and makes you the "Ultimate Rider" - the best rider you can be!

## Problem Identified



- Air pollution is the third-highest cause of death among all health risks in India
- There were about five lakh road accidents in India, which killed about 1.5 lakh people and injured about five lakh people. Majority of accidents (78.4%) are caused due to driver's fault

## Solution Approach



- A smart helmet that filters out 99.9% of air pollutants providing our riders with clean air
- A connected helmet that detects any hazards like accidents and ensure emergency personnel reach you on time
- An ML/AI engine that learns your driving pattern over a period of time and suggests improvements

## Impact



- It protects riders from the hazards of ever-increasing air pollution in India
- The smart helmets detect any hazards like accidents and ensure emergency personnel reach you on time

Improved driving  
behaviour leading  
to lesser  
accidents



### Company Name



**Accenture**

### Name of the Founders/ Key People:



**Arthur E. Andersen**, Founder  
**David P. Rowland**, CEO

### About the company



Accenture Plc is a multinational professional services company that provides services in strategy, consulting, digital, technology and operations. It drives innovation to improve the way the world works and lives, leveraging partnerships with more than three-quarters of the Fortune Global 500.

### Problem Identified



There has been lack of a reliable, effective and sustainable health initiative to reach the citizens in rural areas of India. Systems are more oriented towards treating illness rather than maintaining wellness. Infact, majority of the illness that impact Indians can be prevented. Ill health leads to poverty and loss of livelihood.

### Solution Approach



Access to better health is possible through usage of local resources.

### Impact



Health status of 45,000 people and 6200+community members improved. The objective in the next phase is to scale its services to 1,25,000 people pan India.



Health status of 45,000 people & 6200+community members improved

## Company Name



**IBM India Pvt. Ltd**

## Name of the Founders/ Key People:



**Karan Bajwa**

Regional General Manager,  
IBM India/South Asia

**Ramachandra Dash**

Leader - Watson Health, India Software Labs &  
Delivery Leader, Watson Health GHHS, APAC & GCC

## About the company



IBM has been present in India since 1951. Since inception, IBM India has expanded its operations with regional headquarters in Bangalore and offices across 20 cities. IBM India has established itself as one of the leaders in the Indian Information Technology Industry.

## Problem Identified



Cancer is the second leading cause of death in the world. Lack of awareness and affordability lead to inadequate detection and treatment of cases, 70% of them being detected in advanced stages. Moreover, the prevention programs and screening practices are not well developed in India.

## Solution Approach



IBM's Watson for Oncology functions in four layers. At the onset, it extracts key attributes from a patient's case and then uses them to identify treatment options as determined by clinical guidelines. Consequently, a corpus of evidence data is searched to find supporting evidence for each option. Thereafter, by using Watson's analytics algorithm, the treatment option is prioritized based on evidence. This solution can be implemented, integrated and co-executed with Government initiatives on public health. Specifically, they are delivered through hospital networks like the National Cancer Grid (NCG) or the National Program for Control of Cancer, Diabetes, Cardiovascular disease and Stroke (NPCDCS). The solution is constantly evolving with latest information through ongoing trials, publications and training provided by Memorial Sloan Kettering Hospital.

## Impact



Early detection of cancer is possible, and awareness is created through education. The quality of Cancer Care has seen drastic improvement at the district hospital level. Standardized protocol-based Cancer Care is being promoted pan India. In addition, hub and spoke model and telemedicine can help in accessing a solution like Watson for Oncology under the guidance of National Cancer Grid or some such nodal body to provide world class cancer care to patients even in remote areas of India.



Standardized  
protocol-based  
Cancer Care is  
being promoted  
pan India

## Company Name



**Eyedentify**

## Name of the Founders/ Key People:



**Krishna**, CPO

**Anirudh**, COO

**Dhushyanth**, CTO

## About the company



Eyedentify is an end-to-end automotive IoT solutions company that strives to alleviate safety and security concerns of vehicle occupants, drivers, and fleet owners using technology. They aim to create a future where commuting is seamless, by leveraging technology and providing quality V2X solutions.

## Problem Identified



There are 1.35 million road traffic deaths every year across the globe, with road traffic injuries being the eighth leading cause of death, as per WHO Global status report on road safety 2018. Driver distraction, drowsiness, and drunk driving are the major reasons for road accidents.

## Solution Approach



Eyedentify's DMAS solution identifies and monitors the driver based on vehicle location and speed combined with edge-based video analytics. Eyedentify's solution consists of three main components - Vehicle tracking (GPS), camera, and edge video analytics platform. It incorporates all AI-related techniques like CNNs, GPU optimisations, feature point extractions, and a pre-trained 128-D feature vector embedding for analysis.

## Impact



The solution is poised to help families, businesses, and the government by contributing to safer roads, preventing physical, financial and environmental disasters, providing data for incident validation, increasing fleet profitability, analysing driving behaviour for vehicle insurance premiums, and increasing control over fleet.



DMAS ensures safer roads, prevents physical, financial disasters

## Company Name



**Aptagrim Consulting LLP**

## Name of the Founders/ Key People:



**Sreegopal Mandapaka,**  
CEO & Co-founder

## About the company



Aptagrim helps organisations gain insights from their data and use them to change the way a decision is made. This is achieved through a blend of machine learning, statistical analysis, data visualisation, optimisation, and data engineering techniques.

## Problem Identified



India has a large number of people with visual imparities. This impacts the productivity as it limits people's educational and economic opportunities, participation in the community contributing towards social isolation, and psychological maladjustment.

## Solution Approach



Aptagrim's solution, Aptal, is a smart glass with an integrated camera which helps the user capture images. These images are sent for processing to proprietary Aptal machine learning models which are deployed on smart glasses. Once the images are processed, the speech response is sent to the Aptal glass, which the user hears via the built-in speaker on the glass. Aptal is designed as AI glasses for the blind and visually-impaired. It is integrated with AI/ML models and features such as facial recognition TensorFlow model, emotion and gender detection, image captioning using CNN model, and navigation support with voice commands to guide in navigation using Google Maps.

## Impact



Aptal uses AI to provide the blind and visually-impaired with access to professional training and development, employment opportunities, financial independence, better education, good reading material beyond books in braille, and the ability to navigate around places with confidence. It empowers them to overcome environmental and social challenges such as navigating unfamiliar spaces, socialising with new people, etc.



### Company Name



**CamfyVision Technologies**

### Name of the Founders/ Key People:



**Dr. Vedpal Singh**, Founder, CEO & CTO

### About the company



CamfyVision is an AI-driven product-based company proficient to solve extremely complex problems. They are working on emerging technologies like AI/ML, deep learning, and computer vision. They have developed a facial analytics solution called FacEAI-PRO based on deep learning, which is a highly scalable, ready-to-deploy solution for schools/pre-schools and the corporate sector.

### Problem Identified



CamfyVision aims to improve children's safety in schools and pre-schools using AI. It provides solutions for ensuring safety of kids in various spaces by running a search for kids missing from class, monitoring of school premises, etc.

### Solution Approach



CamfyVision endeavours to enhance student safety and detect mishandling, by having an automated children and school staff management (teaching and non-teaching) system and real-time monitoring of schools by improving discipline and quality education, enhancing user experience, and eventually taking the Indian education system to an international level.

### Impact



In order to ensure a child's safety in the classroom, there are alerts if a kid is found missing for more than 15 minutes. Parents, as well as the school safety staff, receive 'entry and exit' notifications when the child boards or de-boards the school vehicle. Moreover, if a kid is found missing for over 30 minutes in the school premise, alerts are sent to ensure an action is taken by the school authority.



## Company Name



**Haptik**

## Name of the Founders/ Key People:



**Aakrit Vaish**, CEO & Co-Founder  
**Swapan Rajdev**, CTO & Co-Founder

## About the company



Haptik is an enterprise Conversational AI platform based in Mumbai, India, founded in 2013. The platform reaches 30 million devices monthly and has processed over a billion messages so far. Its technology infrastructure employs a blend of artificial intelligence, natural language processing and machine learning. In March 2014, the company launched its first product, the Haptik app which is a chat-based personal assistant which lets its users to get things done for Android and iOS platforms in India.

## Problem Identified



Victims of cyber harassment had to write an email to get in touch in Akancha Against Harassment (AAH) (a not-for-profit organization that seeks to help victims of online harassment, and raise awareness about cyber security), police and mental health professionals, the long response time was a hindrance and led to lack of communication. Swift and timely action was absent

## Solution Approach

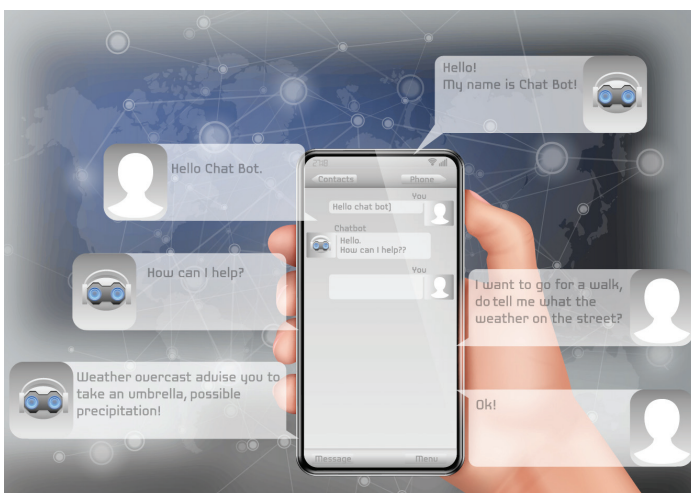


AAH deployed Haptik's 24x7 chatbot helpline. It enabled victims to register a complaint of cyber-harassment, provided tips on combating harassment, and a contact list of cyber cells in India, shared contact information of Akancha and mental health professionals in India, explained the process for contacting police and requesting the assistance of a lady officer, rendered information about upcoming workshops/events across India conducted by Akancha.

## Impact



The bot helped resolve numerous cases of serious online threats and harassment (including 115 cases of rape & acid attack threats), eliminating human intervention to the extent of 90%. The bot has completed over 2,000 conversations (engagement with over 1000 unique users) through a simple and interactive user interface, drawing users even from Tier II cities. The analytics dashboard has helped identify call to action areas related to cyber-safety, with the multilingual capabilities enhancing its reach.



Haptik's bot  
has completed  
over 2,000  
conversations

## Company Name



**Telerad Tech**

## Name of the Founders/ Key People:



**Dr. Arjun Kalyanpur**, Founder & Director

**Dr.Sunita Maheshwari**,

Co-Founder & Director

**Prashant Akhawat**, Chief Operating Officer

## About the company



Telerad Tech was established in 2009 with the aim of optimising radiology productivity and improving patient outcome delivery through transformational medical imaging software solutions. It is now among the global market leaders in providing integrated RIS-PACS software solutions for teleradiology, medical imaging centres, and hospitals of all sizes. In 2018, Telerad Tech launched their first AI product - MammoAssist - and plan to release multiple AI algorithms in 2019.

## Problem Identified



Shortage and unavailability of radiologists for breast cancer mass screening programmes are resulting in its late detection and increasing the economic burden on national health programmes. Breast cancer is the most prevalent form of cancer amongst urban Indian women and late detection of breast cancer is the most common cause of deaths with a 50% mortality rate. There is a need for a 'go or no-go' decision in mass screening programmes aimed at early detection, along with a comprehensive standardised report based on globally-accepted standards.

## Solution Approach



MammoAssist is an intelligent AI algorithm developed using deep learning and image processing approach in the field of radiology, which analyses mammograms for early stage breast cancer detection. It is capable of integrating and processing any DICOM images and providing annotation for breast cancer detection with a structured report. Radiologists can agree or disagree with the report and can also share their comments for every AI finding using an in-built feedback mechanism.

## Impact



Telerad Tech's solution is poised to assist the government and public health organisations in undertaking mass screening of women based on certain signs and symptoms. Early detection will help in executing the care and treatment plan, and hence reduce mortality due to breast cancer. MammoAssist saves time spent by radiologist in typing the report by 60%-70%, and helps increase productivity by more than 50%.



MammoAssist  
helps increase  
productivity by  
more than 50%





## Jury Members

### Mr. Gaurav Gupta

**Mr. Gaurav Gupta** is an officer of Indian Administrative Service of the 1990 batch. He currently works in Karnataka Government as Principal Secretary, Commerce & Industries, with concurrent charge of Information Technology, Biotechnology and Science & Technology.

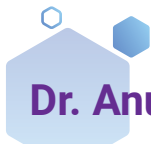
In his present capacity, he promotes investments and industrial development in the state of Karnataka. He also works to enhance the ecosystem for the Infotech and Biotech industry, and promote innovation, research and startups. He works on creating Centres of Excellence and incubation spaces in new technologies such as IoT, AI, ML, Robotics with Industry partners, and on promoting cross domain innovation and use of technology in all sectors - agriculture, health care, et al.

### Dr. Arnab Kumar Laha

**Dr. Arnab Kumar Laha** is Professor of Production and Quantitative Methods at IIM Ahmedabad. He takes keen interest in understanding how analytics, machine learning and artificial intelligence can be leveraged to solve complex problems of business and society. He has published papers in national and international journals of repute and has presented research papers in national and international conferences. His areas of research and teaching interest include Advanced Data Analytics, Quality Management and Risk Modelling.

He has been named as one of the "20 Most Prominent Analytics and Data Science Academicians in India" by Analytics India Magazine in 2018. Earlier, he had been amongst India's best business school professors by Business Today in 2006 and Business India in 2012 and was named as one of the "10 Most Prominent Analytics Academicians in India" by Analytics India Magazine in 2014 and 2017.





## Dr. Anurag Agrawal

**Dr. Anurag Agrawal** is Director at the CSIR Institute of Genomics and Integrative Biology, New Delhi. He is a physician-scientist focusing on the interface of biology, medicine and data. His specialisation is in lung disease and physiology and he also spends a large amount of his time imagining the medicine of tomorrow; with synergy between human expertise and machine learning. His specialties include Patient Care, Bench Research, Translational Research and mHealth.



## Mr. Deep Thomas

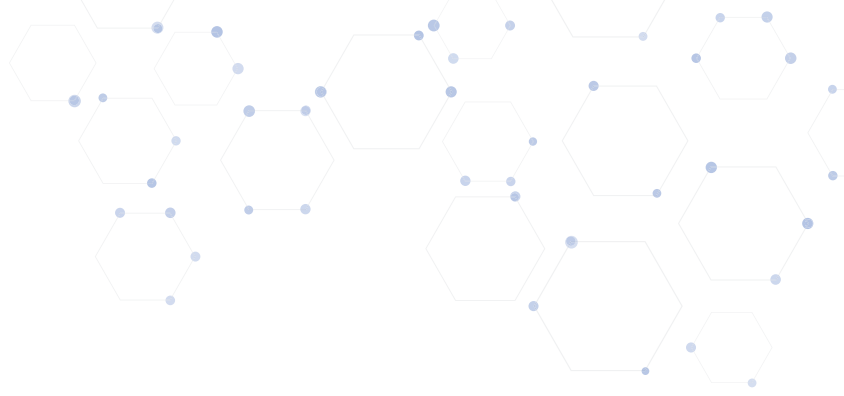
**Mr. Deep Thomas** is Group Chief Data and Analytics Officer at Aditya Birla Management Corporation Private Limited. He is a Global business leader and Data Analytics evangelist with 20+ years proven track record in delivering business and P&L growth across multi-sectors and multi-geographies through business transformation and improved decision making, leveraging advanced analytics, big data capabilities, novel processes, and multi-disciplinary talent.



## Dr. Harish Karnick

**Dr. Harish Karnick** is an Emeritus Fellow and Professor, Department of Computer Science and Engineering at IIT Kanpur. His Research Interests include Automated & Common Sense Reasoning, AI and Programming Languages.





## Mr. Gaurav Gupta

**Mr. Gaurav Gupta** leads Egon Zehnder's Technology & Communications Practice in the Asia-Pacific region and is also active in the Industrial and Services practices and the Family Business Advisory. He is a trusted advisor to clients across high-tech, telecommunications, manufacturing, and digital, with a special focus on large, family-owned businesses in southern India. He conducts executive and board searches, assesses management and team effectiveness, and provides leadership development advice. He has more than 20 years of strategic and operational consulting experience.



## Mr. Naganand Doraswamy

**Mr. Naganand Doraswamy** is Managing Director & Founder of Ideaspring Capital. He is a serial entrepreneur turned investor. After exiting his most recent start-up, he founded Ideaspring to fund and actively support product innovation start-ups. He enjoys working with entrepreneurs who have the vision and passion to build products for the global markets. He is very well networked and respected in the start-up ecosystem and he actively participates in various organizations focusing on Entrepreneurship and Innovation.



## Mr. Prakash Mallya

**Mr. Prakash Mallya** is Managing Director at Intel India, Sales & Marketing Group. He is passionate about making a difference and is equipped with international sales & marketing experience and a proven track record of building successful business relationships, leading cross-cultural teams, defining strategy and delivering compelling results with due emphasis on operational excellence.





## Mr. P Ramani

**Mr. P Ramani** is an accomplished global technology leader with over 25 years of experience in managing large R&D organizations, site leadership, grooming high performing leaders and delivering high quality products in mobility, network / endpoint management, retail and satellite communications. He holds an M.S. in Computer Science from Rochester Institute of Technology, NY and work experience spanning US and India across companies like Hughes, Motorola and VMware (Airwatch).

He currently serves as Sr. Director R&D, Customer and Partner programs. In this role, he leads the strategy and execution of a wide range of customer and partner engagement programs from R&D, working with go to market and other customer facing functions across India and APJ. This includes initiatives to drive strategic engagement with customers and partners, startup and industry ecosystems and emerging market opportunities.



## Dr. Sriparna Saha

**Dr. Sriparna Saha** is Associate Professor, Department of Computer Science and Engineering at IIT Patna. She received the M Tech and Ph D degrees in computer science from Indian Statistical Institute, Kolkata. She is the author of a book published by Springer-Verlag. She has authored or co-authored more than 120 papers in reputed journals and conferences including IEEE/ACM transactions and core ranked conferences.

She is the recipient of the Lt Rashi Roy Memorial Gold Medal from the Indian Statistical Institute for outstanding performance in M Tech (computer science). She is the recipient of the Google India Women in Engineering Award 2008, NASI Young Scientist Platinum Jubilee Award 2016, BIRD Award 2016, IEI Young Engineers' Award 2016 and Humboldt Research Fellowship.



## The Top 25 AI Innovators





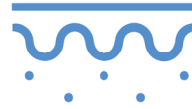
**ZERONE**  
CONSULTING



**accenture**



**CV Camfy Vision**



**Chimple**

**IBM**

Aptagrim







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