



Celebrating India's Emerging
DeepTech Companies

Knowledge Partner





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Foreword

Pari Natarajan
CEO, Zinnov LLC



2023 has been a redefining year for both technology creators and consumers, with a deep focus on advancing innovation in the wake of seismic macro-environmental and consumer changes. While global institutions look for solutions to adapt to this new paradigm, India has emerged as the lighthouse, steering a lot of the big technology advancements, fueled largely by the robust start-up ecosystem that is a key facilitator of this technology renaissance. At the heart of this ecosystem are DeepTech start-ups, designed as gamechangers that build new products and services through hyper-advancements in scientific and engineering modeling.

DeepTech spans across a multitude of industries, from AgriTech and HealthTech to SpaceTech and Edtech, and these start-ups embody the convergence of cutting-edge science and entrepreneurial spirit. As we increasingly see the transition of DeepTech from theoretical research to concrete market solutions across key technologies such as Artificial Intelligence, Machine Learning, Blockchain, Internet of Things, Big Data & Analytics, Robotics, the opportunities for Indian technology industry become limitless.

As we forge into the future, DeepTech will continue to be entrenched into the fabric of innovation and cutting-edge data science. The rise of DeepTech start-ups isn't just a chapter, but the preface to a story yet to be written.

Over the years, Emerge50 has become the standard-bearer in recognizing agents of change – companies that continue to push the boundaries on what is possible. The cohort this year represents a diverse cross-section of DeepTech companies that are providing real-world solutions to complex global problems. Zinnov is proud to partner with nasscom in the evaluation and selection of the 2023 winners – celebrating the next 'techade' in the Indian Technology revolution.

Knowledge Partner





Message from nasscom

Debjani Ghosh
President, nasscom



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DeepTech spans across a multitude of industries, from AgriTech and HealthTech to SpaceTech and EdTech, and these start-ups embody the convergence of cutting-edge science and entrepreneurial spirit. As we increasingly see the transition of DeepTech from theoretical research to concrete market solutions the opportunities for Indian technology industry become limitless. Emerge 50 has become the standard-bearer in recognizing agents of change – companies that continue to push the boundaries on what is possible. The cohort this year represents a diverse cross-section of DeepTech companies that are providing real-world solutions to complex global problems. Our best wishes to each of the Emerge leaders of 2023.”

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Message from nasscom

Ramkumar Narayanan
Chair Deep Tech Council, nasscom



“

Over the years, nasscom Emerge 50 has been synonymous with the growth of the Indian tech startup ecosystem. The growing focus on DeepTech led innovation across multiple domains and industries and the infusion of inventive DeepTech into the DNA of B2B products and SaaS companies, have catapulted the growth of Indian DeepTech Startups. The 2023 cohort of Emerge 50 represents the transformative potential of the DeepTech ecosystem to solve some of the world's pressing challenges and celebrates groundbreaking solutions that can redefine future of industries and business from India to the world.

The nasscom DeepTech council will continue to work with stakeholders across government, industry, academia, and corporates to build 10,000 world class DeepTech startups from India.”

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India's Emerging
DeepTech Companies



LEAGUE OF 10





Pradeep Walia
FOUNDER
& DIRECTOR



Girish Somvanshi
CO-FOUNDER
& DIRECTOR

elevator

Revolutionizing healthcare with award-winning technology that identifies retinal abnormalities, impacting over 21 crore Indian families.

pitch

Problem Statement

Identifying and treating vision problems promptly can avert 90% of blindness. However, over 90% of individuals with asymptomatic retinal abnormalities fail to seek medical attention, resulting in an annual economic loss of approximately INR 90,000 Crores for the Indian economy.

Product Innovation

Leveraging cutting-edge technologies such as Robotics, A.I. and 3D printing, the startup's state-of-the-art, multi-award-winning commercial devices and A.I. solutions address accessibility, affordability, availability, accuracy, and dependability in identifying individuals with retinal abnormalities. These innovations are applied for both in-clinic and mass screening within both private and public healthcare systems.

Product: AICEE (AI enabled Comprehensive Eye Examination)

Website: <https://www.artelus.com/>

Year of Incorporation: 2016

Unique Proposition and Impact

Revolutionizing eye care, the startup's solutions have screened over 2,00,000 individuals, detecting 32,000 with retinal abnormalities, notably in underserved rural areas. The unique hardware includes operator-independent Fundus screening and the world's most economical and portable OCT. A.I. capabilities offer high sensitivity and specificity, offline functionality, and precise identification of 19 retinal abnormalities, with an explainable A.I. highlighting affected areas, ensuring unmatched diagnostic accuracy and early intervention. This comprehensive approach prevents irreversible vision loss.

Way Forward

Over the next 3-5 years, the growth plan involves expanding retinal abnormality detection, submitting eight US FDA filings, predicting MI/stroke from fundus images, launching the world's most economical IOCT, SS OCT, and the first ROP OCT, aiming for a fivefold increase in sales and eightfold increase in profits within three years.





Alex D Paul
CO-FOUNDER
& CEO

Dr. J Fathima Benazir
CO-FOUNDER
& CSO

elevator

Pushing the climate change agenda to protect the environment from bio-hazardous chemicals used in life science research and molecular diagnostic applications.

pitch

Problem Statement

Pushing the climate change agenda to protect the environment from bio-hazardous chemicals used in life science research and molecular diagnostic applications.

Product Innovation

Azooka addressed India's PCR/RT PCR technology gap during COVID-19 by adopting ThermoFisher's solution. Azooka Eco-fluors use food-grade molecules, simplifying technology and eliminating biohazard risks. Their Molecular Transport Medium (MTM) preserves samples at room temperature for two weeks, offering cost-effective, pathogen-inactivating solutions, addressing accessibility challenges in India and other third-world countries.

Product: Eco-Fluor series

Website: <https://www.azooka.life/>

Year of Incorporation: 2016

Unique Proposition and Impact

Azooka's RNA WRAPR, a COVID-19 molecular transport medium, achieved rapid success, selling a million units in a year with no contamination reports, earning recognition and the Technology Start-up Award from the Technology Development Board. As the only private biotech company in India with a Genomics Manufacturing Unit, Azooka is featured in Bloomberg market reports. Their patented Eco-Fluors, offering a safe alternative for nucleic acid testing, have global recognition. The company's molecular transport mediums (MTM) now cater to diverse sample types, alleviating difficulties in obtaining collection kits for cancer and NIPT.

Way Forward

Over the next 3-5 years, Azooka, the exclusive safe genomics consumables vendor in Asia, aims to diversify its contributions to genomic and molecular diagnostics. Plans include consumables for mRNA research, cell stabilization for flow cytometry, expanding Eco-Fluors for DNA quantification, and global expansion through strategic licensing and regulatory approvals.





Kiran Vangaveti
FOUNDER
& CEO

elevator

BluSapphire is solving for Effective Cyber Threat detection, Mitigation ensuring client business continuity.

pitch

Problem Statement

Despite investing millions in cybersecurity programs, organizations remain vulnerable due to the deployment of siloed technologies for cyber threat detection. A real skill shortage exists, and there is a lack of robust automation to effectively contain identified cyber threats, resulting in isolated and ineffective cybersecurity operations.

Product Innovation

BluSapphire innovates with a unified security operations platform, breaking down silos to detect threat signals early. Powered by robust analytics, big data, and AI, it ensures comprehensive threat identification. BluSapphire's intelligent response automation effectively mitigates cyber threats across IT infrastructure, eliminating the need for highly skilled resources.

Product: BluSapphire

Website:
<https://blusapphire.com/>

Year of Incorporation: 2017

Unique Proposition and Impact

BluSapphire delivers unparalleled impact and value in cybersecurity, boasting a mean time to detect of <5 minutes, a remarkable improvement from the industry average of 210 days. With smart automation, BluSapphire responds to cyber threats within seconds, reducing SOC costs by up to 70%. Its unique proposition lies in being a unified platform, built from the ground up, offering seamless integration of essential technology functions, including NDR, UEBA, EDR, SOAR, XDR, SIEM, EPP, and Deception. BluSapphire's Agent-less framework and open data lake ensure comprehensive, efficient, and scalable cybersecurity solutions, surpassing industry standards.

Way Forward

Demonstrating consistent profitability, the company remains steadfast in its commitment to success. In the near term, the objective is to secure Series B funding, propelling the organization toward the goal of becoming a \$100 million ARR entity within the next three years.





Nilesh Dhande
CO-FOUNDER
& CEO



Sanjay Deshpande
CO-FOUNDER
& CHIEF SCIENTIST



Arun Gupta
CO-FOUNDER
& DIRECTOR

elevator

Fortytwo Labs creates a quantum-safe digital trust ecosystem by using its patented digital Identity technology I-AM (अहम्)

pitch

Problem Statement

Fortytwo Labs addresses the problem of Digital Identity Crisis for this interconnected digital world. Human digital identities work in siloes and there is no system for non-human's digital identities, leading to ever increasing cyber-attacks. With quantum computers there is greater threat to the integrity and confidentiality of identity and data.

Product Innovation

To deliver quantum-safe digital trust ecosystem, Fortytwo Labs I-AM establishes a cryptographic digital identity fabric for everyone and everything. I-AM digital identity is a continuously evolving chain of attributes, identifiers and events over time dimension. Platform delivers enterprise-wide Cryptographic Services viz. quantum-safe Mutual Authentication, MFA, Zero Trust Access, consent/ e-signature.

Unique Proposition and Impact

Fortytwo Labs' I-AM platform is a pioneering solution in secure communication. Adopted by Indian defence units, an Israeli government unit, and over 50 million ICICI Bank users, it offers centralized identity and multi-factor authentication. Its unique proposition lies in being India's sole Post-Quantum Cryptography compliant platform, ensuring tamper-proof digital operations with patented cryptographic identity technology.

Way Forward

In the coming 5 years Fortytwo Labs plans to touch over 5 billion digital identities across enterprises, banks and defence/ govt entities. I-AM envisions to be the default PQC compliance model from India. The company revenues are poised to grow from \$1Mn to \$20Mn ARR.

Product: I-AM

Website:
<https://www.fortytwolabs.com/>

Year of Incorporation: 2016





Suyash Singh
CO-FOUNDER & CEO



Denil Chawda
CO-FOUNDER & COO



Pranit Mehta
CO-FOUNDER & VP, BUSINESS DEVELOPMENT

elevator

Building the world's first multi-sensor imaging satellite, redefining the future of earth observation

pitch

Problem Statement

Earth Observation involves two data types: Optical and SAR. Optical data is information-rich and analytics-friendly but is only 30% available due to clouds and night-time. SAR, while 100% available, lacks analytics friendliness. Today, the fusion of both is inaccurate due to spatial and perspective mismatches.

Product Innovation

Our proposed hybrid sensor smart satellite constellation pioneers a groundbreaking approach. It acquires and fuses Optical and SAR data simultaneously, at a pixel level, overcoming individual sensors' limitations and leveraging their strengths. This innovation creates a novel dataset, opening new possibilities in Earth Observation.

Unique Proposition and Impact

The innovative satellite technology from GalaxEye, creates a substantial impact across diverse industries, providing 24/7 all-weather imaging for real-time, data-driven decisions in defence, utilities, insurance, and disaster management. Aligned with the 17 Sustainable Development Goals, fulfilling them is a core part of the strategy. The unique proposition is embodied in their hybrid sensor, synchronizing Optical and SAR data acquisition on the same satellite, addressing a technological gap and eliminating a significant entry barrier in the industry.

Way Forward

Growth plan for the next 3-5 years: GalaxEye aims to unlock opportunities with an advanced satellite constellation, providing actionable earth observation insights. Starting in earth observation, the plan is to expand into outer space, supporting multi-planetary missions and activities like asteroid mining with developed technologies.

Product: Drishti

Website:
<https://galaxeye.space/>

Year of Incorporation: 2021





Dr. Anirvan Chatterjee
CO-FOUNDER & CEO

Gaurav Srivastav
CO-FOUNDER & COO

elevator

A genomics diagnostic pioneer, identifies infections, enabling precise antibiotic prescriptions within 12 hours.

pitch

Problem Statement

Infections pose a severe global health threat, with 14 billion cases annually and 11 million fatalities attributed to sepsis. Hospitals worldwide face a significant challenge, as 40% of ICU deaths result from undiagnosed infections due to limited diagnostic capabilities, making patients reliant on symptom-based therapy.

Product Innovation

The infexn™ test by HaystackAnalytics, is a groundbreaking genomics solution that utilizes advanced data analytics for rapid and precise detection of infectious diseases. This 'Made in India' proprietary technology can detect all bacteria and fungi while simultaneously identifying major antimicrobial resistance genes. With a remarkable 12-hour turnaround time and direct sample analysis, it surpasses the limitations of traditional microbial cultures, providing clinicians with comprehensive and evidence-based diagnostic insights.

Unique Proposition and Impact

HaystackAnalytics addresses the global health threat of infections with its infexn™ test, leveraging genome sequencing for rapid pathogen and antimicrobial profile detection within 12 hours. This innovative solution ensures timely treatment, critical for saving lives, particularly in the context of drug-resistant pathogens. Their unique proposition lies in a genomic Single Test Solution, providing accessible clinical therapy within a 12-hour turnaround time. The infexn™ test's genomic approach enhances pathogen identification, even for rare and challenging infections.

Way Forward

Over the next 3-5 years, their growth strategy involves widespread access to genomics by collaborating with numerous labs and hospitals. The plan includes expanding their product range in Southeast Asia and the Middle East by 2024, with subsequent expansion into the US and Europe.

Product: infexn

Website:
<https://haystackanalytics.com/>

Year of Incorporation: 2018





**Rajith
Nair**

MANAGING DIRECTOR
& CEO

**Prasanth
Thankappan**

CTO

elevator

National Award winner offering cost-effective, high-quality digital radio solutions through Software Defined Radio technology.

pitch

Problem Statement

The global mandate for Digital Radio Broadcasting faces a hurdle with existing receiver solutions, which demand dedicated chips, increasing costs and complexity. This impedes technology penetration into emerging markets, hindering the swift digital transformation of Broadcast Radio.

Product Innovation

Inntot innovates by replacing dedicated radio chips with its Software Defined Radio-based Digital Radio Receiver solutions. Patented improvisations (8 granted patents, 6 pending) prioritize superior quality, executing complex operations through software rather than dedicated chips. This eliminates the need for specialized hardware, enhancing flexibility and reducing costs.

Product: High quality and cost-effective Digital Radio Broadcast Receiver IP solution

Website:
<https://www.inntot.com/>

Year of Incorporation: 2014

Unique Proposition and Impact

Inntot's innovative solution promises a cost-effective and high-performance digital radio receiver, expediting the market's digital transformation. With cost savings of 3-12 USD per receiver, superior quality, universal support for all digital radio standards, and quick time-to-market, Inntot's offering ensures widespread access to advanced radio technology.

Way Forward

Inntot aspires to dominate the Digital Radio Receiver solution sector, aiming for over 50% global market share in automotive, consumer electronics, and mobile phones, solidifying its position as the leading player in the industry.





Jayant Ratti
FOUNDER



Tushar Maurya
CO-FOUNDER

elevator

Transforming smartphones into urban sensors, revolutionizing city management through AI-driven citizen engagement.

pitch

Problem Statement

The project seeks to tackle inefficiencies and a dearth of comprehensive insights in urban management. Traditional city monitoring methods frequently fail to capture real-time data on critical elements such as traffic violations, infrastructure condition, and road monitoring. This results in impaired decision-making, misallocation of resources, and inadequate responses to urban challenges. The initiative aims to address specific issues like cattle on roads, waste disposal, horticulture damage, waterlogging, and road conditions including pavement, manholes, speed breakers, kerbstones, and median damage.

Product Innovation

NAYAN revolutionizes urban management through its innovative NAYAN Smart App, uniting citizen engagement, AI, and computer vision. The app transforms users into contributors to a distributed sensor network, collecting real-time data on traffic, infrastructure, and waste management. AI-driven algorithms analyze patterns, anomalies, and trends, addressing urban challenges and fostering smarter, efficient, and citizen-centric cities.

Product: NAYAN

Website: <https://nayan.co/>

Year of Incorporation: 2018

Unique Proposition and Impact

NAYAN's technology transforms urban management, utilizing AI and citizen engagement to optimize resource allocation, reduce costs, and enhance service delivery. This not only fosters economic opportunities but also ensures transparent decision-making, addressing diverse urban challenges. The unique propositions include a crowdsourced monitoring system, AI and computer vision capabilities, adaptable deployment options, rapid scalability with attractive incentives, ease of replication, and a pay-as-you-go model. With 70+ technology patents globally, NAYAN stands as a versatile, scalable solution with significant global potential.

Way Forward

NAYAN aims to be the eyes on roadways and public spaces, extending its vision. Long-term plans involve leveraging AI, machine learning, and data analytics expertise to develop cutting-edge solutions, requiring investments in research, strategic partnerships, talent acquisition, and potential global expansion.





**Pulkit
Ahuja**
FOUNDER
& CEO

elevator

Connecting over 78% of global workforce through Industrial IoT solutions that organize, track, and manage the blue-collar workers.

pitch

Problem Statement

Despite the advancements in productivity tools for white-collar workers (Zoho, Slack, Zoom, Teams etc.), blue-collar workers in critical industries like Oil & Gas, Mining, Construction, Policing, and Power remain excluded. Existing tools designed for mobiles and laptops are impractical in these sectors, hindering productivity, efficient management, and task-specific data access for industrial workers.

Product Innovation

Proxgy pioneers a 3-layered ecosystem, integrating Industrial IoT hardware, a software middle layer, and a SaaS subscription layer. The suite includes innovative IoT products: SmartHat, Sleeve, Lockator, AudioCube, AirHat, and BirdBox with over 15 granted patents. The middle layer ensures direct chipset-to-cloud connectivity, edge processing for time-sensitive use cases, and optimization algorithms tailored to client requirements. The software layer incorporates industry-specific AI/ML models, extracting intelligence from previously untapped data sources such as sensors and cameras on devices.

**Product: SmartHat
(Smart Safety Helmet)**

Website:
<https://www.proxgy.com/>

Year of Incorporation: 2020

Unique Proposition and Impact

Proxgy's technology is impacting industries such as power, fintech, logistics, warehousing, construction, mining, oil & gas, and banking. By democratizing the IIoT sector, Proxgy ensures accessibility for businesses and individuals. With over 15 granted patents and ongoing innovations, the company maintains a substantial competitive advantage, providing unique solutions across diverse industries.

Way Forward

Over the next 3-5 years, Proxgy is committed to advancing several of our patented hardware solutions from concept to proof of concept (PoC) or mass production stages. Simultaneously, they aim for global expansion in key markets like the Middle East, Australia, the Americas, and Europe.





Nishanth Raja
CO-FOUNDER & CEO



Aswin Kumar Kathirvel
CO-FOUNDER & CTO



Krishnan Balasubramanian
CO-FOUNDER

elevator

Offering innovative, hot-junction-free waveguide sensors for accurate high-temperature industrial IoT.

pitch

Problem Statement

Continuous temperature monitoring in high-temperature processes is hindered by sensor issues. Traditional sensors like thermocouples and pyrometers are bulky, prone to drift and hot junction failure, causing frequent manual intervention, limited data, and reduced process efficiency.

Product Innovation

XYMA Analytics' innovative sensors offer a reliable solution to enhance industrial temperature monitoring. Their waveguide-based sensors provide a reliable, multi-point measurement solution without vulnerable hot junctions in high temperatures. Enhanced with advanced signal processing, these sensors ensure precise temperature measurements in challenging environments, enabling continuous monitoring of molten metals and ore melts.

Product: μ TMapS (Multi-point Temperature Mapping sensor)

Website: <https://xyma.in/>

Year of Incorporation: 2019

Unique Proposition and Impact

XYMA Analytics, rooted in IIT-Madras expertise, revolutionizes high-temperature industries with robust, multi-parameter sensors, democratizing process efficiency and enabling data-driven decision-making. Their unique proposition lies in patented ultrasonic waveguide technology, integrated with industrial IoT & indigenous product components, serving critical measurements across sectors. Adaptable waveguide materials and structures ensure widespread use, validated in petrochemical, metals, glass, and semiconductor industries, guaranteeing competitive pricing and protection.

Way Forward

XYMA Analytics' growth plan focuses on addressing automated temperature measurement gaps in the aluminium smelting industry with their innovative sensor. The strategy involves evolving this solution into a plug-and-play offering applicable across the sector, tailoring solutions to diverse use cases, implementing multiple calibrations in decentralized manufacturing facilities, and ensuring effective service to industries in different geographical regions.





Lorem ipsum

AgriTech

Cutting-edge technology-driven innovations in agriculture, leveraging deep tech solutions and advanced technologies to optimize farming practices, enhance crop and livestock management, and promote sustainability and efficiency in agriculture.

Farmonaut Technologies



Product Name: Farmonaut - satellite based crop health monitoring system

Co-Founders: Ankur Omar - Founder and CEO; Akash Omar - Co-Founder

Website: <https://farmonaut.com/>

Problem Statement

Farmonaut aims to address agricultural challenges by providing farmers with innovative technology solutions for crop monitoring, disease detection, and yield prediction. Their goal is to empower farmers with data-driven insights and decision-making tools to optimize their farming practices and increase productivity.

Product Innovation

Farmonaut utilizes satellite imagery, artificial intelligence, and machine learning to revolutionize agriculture. Offering real-time crop monitoring, disease detection, and yield prediction, the product empowers farmers with actionable insights for informed decision-making. By seamlessly integrating cutting-edge technologies, Farmonaut optimizes resource use, reduces losses, and enhances agricultural outcomes, distinguishing itself in the agricultural tech sector with its holistic and innovative approach.

Fuselage Innovations



Product Name: Crop protection of drone FIA, as per the data from the drone Nireeksh G.

Co-Founders: Devan Chandrasekharan, MD and Devika Chandrasekharan, Director

Website: <https://fuselage.co.in/>

Problem Statement

Post the 2017-18 floods in Kerala, soil nutrient depletion impacted crop yields, prompting the need for precise plant treatment methods. Addressing issues of crop damage and unscientific practices, our solution considers soil and leaf characteristics, minimizing the impact on the entire acreage. This approach, tailored to agriculture 4.0, aims to enhance efficiency amid labor shortages and evolving environmental conditions.

Product Innovation

Nireeksh AG UAS and FIA QD10 UAS revolutionize precision agriculture with multispectral drones featuring red, red edge, NIR, IR, RGB, and thermal sensors. These UAVs collect field data for predictive updates through dedicated farm management software, enhancing crop health monitoring. FIA QD10's high-performance design supports ultra-low volume spraying, offering cost-effective and accurate plant treatments based on leaf analysis data. Fuselage prioritizes data security, promotes bioagents against pests, and integrates NavIC for weather alerts, setting new standards in smart agriculture.



Godaam Innovations

GODAAM
INNOVATIONS PVT LTD



Product Name: Godaam Sense

Founder: Kalyani Shinde, CEO

Website: <http://godaaminnovations.com/>

Problem Statement

India loses 70000 crore worth of crop in storage. Onion is one such crop, where India is the producer, with more than 3 crores MT of onions every year. Of this 70-80% produce is stored in the warehouses for a period of 6-8 months, where wastage of is close to 40-50% impacting the demand supply ecosystem of the crop value chain; When we studied the onion value chain, we discovered the root cause was unscientific storage structure and outdated storage practices. This led to poor hold time leading to: (a) supply gap in the value chain and (b) selling at suboptimal prices in the market to sell the produce as quickly as possible.

Product Innovation

Introducing IoT-based solution for real-time climate and gas monitoring in warehouses, addressing the lack of crop condition insights for farmers and warehouse owners. Our platform, Godaam, employs proprietary algorithms to analyze data, sending alerts and providing users with comprehensive insights for informed decision-making. Offering consultancy in warehouse construction and storage methods, Godaam innovatively integrates digital solutions into traditional structures, ensuring technology adoption and cost-effectiveness for onion farmers.



<https://nasscom.in/emerge50/>



Aviation and SpaceTech

A category of DeepTech startups specializing in solutions related to space exploration, satellite communication, and the aviation industry.

Product Name: Laser/Optical Communication Terminals

Founder: Nitish Kumar Singh, CEO

Website: <http://astrogatelabs.com/>

Problem Statement

With the advent of small-sats and the flourishing new space economy, private participation is ever growing. Small-sats can now serve applications such as earth observation, asset tracking, experimental and academic missions at a fraction of the cost. ; As more and more constellation operators adopt small sat platforms for their business, they run into satellite data bottlenecks on existing radio-frequency systems. Over 25,000 smallsats are expected to be launched by 2030 and sole RF downlink systems are straining under the data demand, spectrum allocation and coordination issues.; Astrogate's laser communication system solves these bottlenecks and enables satellites to return over 10x data at nearly half the cost of existing RF systems.

Product Innovation

Astrogate Labs pioneers high-speed data transmission using laser beams, exceeding 1 Gbps through free-space optical communication. Utilizing a laser transmitter on satellites and a ground receiver, their system relies on precision pointing and tracking to maintain laser focus. The proprietary satellite laser downlink terminal fits small-satellite SWaP constraints. The compact optical ground station, with minimal infrastructure needs, ensures easy installation and operation. Astrogate Labs stands out by providing an end-to-end solution, combining satellite hardware and an optical ground station, uniquely catering to the niche field of laser communication.



<https://nasscom.in/emerge50/>



Cybersecurity

Encompassing deep tech software solutions including Network security, endpoint security, IAM (Identity & Access Management), Security Analytics, BYOD security, Data & device security, data privacy, anti-theft measures, Anti-spy software, and Identity theft protection.

AppSentinels



AppSentinels.ai
Application Security Re-invented

Product Name: AppSentinels API Security Platform

Co-Founders: Puneet Tutliani, CEO; Deepak Kushwaha; Mohit Joshi, CDO

Website: <https://www.appsentinels.ai>

Problem Statement

As per Gartner, APIs are the largest attack vector. Current AppSec products don't have the necessary application context and can't differentiate if they are protecting a bank, fintech, healthcare or a marketplace!! Complex API based business logic exploits are blind spots for these products. The problem is so complex that large tech companies like MS, Google, AWS, FB, Uber, Apple etc are facing repeated API breaches.

Product Innovation

AppSentinels provides a revolutionary platform with deep white-box insights into applications, discovering APIs, PII/Sensitive data, and providing real-time risk scores. It acts as a 24x7 pen-tester, integrating security testing into the CI/CD cycle for proactive security. The Intelligent Stateful API DAST blocks known and unknown attacks, offering pinpointed remediation for developers and insights for security teams. The platform ensures rapid onboarding, supporting SaaS or on-prem deployment, fostering collaboration between product and sec-ops teams for comprehensive API security.

PrivaSapien Technologies



Product Name: PrivaGalaxy

Co-Founders: Abilash Soundararajan, Founder & CEO; Deepika Abilash, Co-Founder & COO

Website: <https://www.privasapien.com/>

Problem Statement

Privacy & Responsible AI regulations are emerging across the globe with huge penalties and reputational risk. Organizations should collect specific consent, do privacy risk assessment, follow purpose and storage limitation, implement privacy by design and build Responsible AI. Without right technology solutions, its impossible to meet these complex requirements.

Product Innovation

PrivaSapien has built a pioneering Unified Privacy Engineering and Responsible AI platform. We have built award winning and patent pending products for Privacy Threat Modelling, Expert anonymization, Synthetic data generation, Cryptographic pseudonymization, Privacy preserved insight generation and Gen AI governance, to enable organizations succeed in the data & AI era. PrivaSapien's PrivaGalaxy platform is a category creating Unified Privacy Engineering and Responsible AI platform. PrivaGalaxy platform is globally unique and revolutionary. We have filed 15 patents, won multiple awards including Aatmanirbhar Bharath Award, DSCI's National Privacy Challenge, Innovation box, Maruti Suzuki's MAIL and a Middle East regulatory Privacy Engineering sandbox.



Prophaze Technologies



Product Name: Prophaze Web Application Security

Co-Founders: Vaisakh T R, Founder, CEO and Lakshmi Das, Co-Founder, COO

Website: <https://prophaze.com/>

Problem Statement

Web Applications/APIs are vulnerable to cyber-attacks every now and then. Generally, Deployment of conventional WAFs to protect them takes a lot of time and involves complex configuration with respect to the customer applications. It will also have issues of False positives and false negatives which comes post deployment.

Product Innovation

Prophaze WAF can easily monitor, detect and mitigate the attacks in real time in an unnoticeable fraction of seconds. It can protect all sets of Web API, Web Applications, Mobile Backend Apps, ERP solutions, CRM and many more, so anything which is exposed to the real world and coming through http traffic, Prophaze can secure that. Prophaze WAF is world's first company to launch pure Kubernetes driven SD-WAF. We have our own AI/ML based behaviour detection of cyber threats and Fast and Easiest deployment model in just six simple steps.

Seconize Technologies



Product Name: DeRisk Center

Co-Founders: Chethan Anand, CEO; Dr. Sashank Dara, CTO

Website: <https://seconize.co>

Problem Statement

Enterprises embrace digitization to grow their business, but lack a holistic view of the risks exposed by their digital assets. Assessing the cyber risks via consultants is laborious and time consuming, vulnerability assessment tools are too technical do not consider the business impact, impossible for the executives and board to understand the business risks and where to invest their time and money, the reports are point in time and does not cater to the ever changing threat landscape.

Product Innovation

Seconize DeRisk Center is a cutting-edge SaaS product for automated and continuous IT risk and compliance management. It offers executives a clear understanding of their organizational risk profile, provides CISOs real-time visibility across the infrastructure, and empowers IT teams with insights into root causes and remediation. Setting itself apart, Seconize employs contextual risk analytics, predictive risk intelligence through AI and ML, and delivers its solution via the cloud for easy deployment, management, and a risk-free trial option.





EdTech

Solutions focused on leveraging DeepTech, digital, and technological innovations to enhance and facilitate teaching and learning processes, such as Learning Apps, Test Preparation Tech, Language Learning Platforms, and more.

AirV Labs



Product Name: AirVu

Co-Founders: Dr. Kesh Kesavadas, Founder, CTO; Faisal Yazadi, Co-Founder, CEO

Website: <https://www.airvlabs.com>

Problem Statement

Developing high stakes human to human interaction is costly, time consuming, and complicated in all domains including medical training, customer support, tele-medicine, Sales etc. Organizations spend huge financial resources trying to address these needs but the existing solutions are quite in-efficient, and the outcomes are not always reliable.

Product Innovation

AirV Labs introduces AirGen, a patented technology merging complex scenarios with a Generative AI interface to craft interactive applications. Our focus spans high-stakes training, tele-consulting, tele-monitoring, professional onboarding, and safety. Experience highly realistic VR training and upskilling at 10-20% of traditional development time. Integration with Generative AI makes the VR environment a customized front end for vast language models. The cloud-compatible AirVu platform ensures seamless accessibility and functionality.

Asset Chain Techlligence



Product Name: TruScholar

Co-Founders: Samit Singhai, CEO; Mayur Zanwar, CFO

Website: <https://truscholar.io>

Problem Statement

Truscholar is attempting to solve the problem of the traditional talent ecosystem being linear and broken. This may involve addressing issues such as the difficulty of verifying traditional credentials, the inflexibility and slow adaptability of traditional forms of education, and the barriers to entry at various platforms created by the reliance on traditional credentials.

Product Innovation

Truscholar does this by offering a platform for issuing, verifying, and sharing digital credentials. These credentials can be used to certify skills and knowledge in a variety of contexts, including education, employment, and professional development. The use of digital credentials allows individuals to demonstrate their skills in a more flexible and portable way and makes it easier for organizations to verify and recognize those skills. Truscholar stands out through its use of blockchain technology. It leverages Hyperledger Indy, an open-source framework, to create a private permissioned network. This unique approach ensures the security and transparency of academic credentials, facilitating self-sovereign identity and fraud prevention.



Dimension NXG



Product Name: AjnaXR

Co-Founders: Pankaj Raut, CEO; Abhijit Patil, COO; Abhishek Tomar, CTO

Website: <https://www.ajnalens.com/>

Problem Statement

At AjnaLens, we are tackling a pressing global issue head-on: the escalating rise in unemployment rates worldwide. In a world where economic opportunities are not evenly distributed, our mission is to construct a skill-first paradigm that bridges this gap and empowers individuals with equal prospects.

Product Innovation

We have crafted a revolutionary INSTANT learning system that marries the cutting-edge power of XR technology with the wisdom of Vedic knowledge. This fusion, accompanied by the insights of biomarkers and the velocity of rapid learning systems, is the engine propelling instantaneous skill empowerment. AjnaLens excels with distinctive features: Immersive Learning via VR for superior knowledge retention, Realistic Simulations for industries like healthcare, aviation, and manufacturing, Accessibility to remote areas, Scalability for diverse learning needs, Active Engagement in alignment with Dale's Cone of Experience, and Cost-effective VR solutions accessible to a broader user base.

Stupa Sports Analytics



Product Name: Stupa Cast

Co-Founders: Mandar Megha Gambhir, CEO; Deepak Malik, COO

Website: <https://stupaanalytics.com/>

Problem Statement

Broadcasters grapple with real-time analytics to enhance viewership. Event organizers struggle with efficient virtual integration and revenue generation. Events need broader, data-driven, and personalized global distribution strategies.

Product Innovation

Stupa Analytics bridges the data gap in sports, providing broadcasters real-time AI insights and aiding federations in efficient management. For athletes and coaches, our technology offers performance-enhancing data, while our solutions digitize and streamline operations, from grassroots to global stages. Stupa harnesses advanced AI algorithms for predictive analytics in broadcasting, integrates seamless live streaming tech for events, and utilizes adaptive streaming for global content distribution. This tech-centric synergy, backed by customizable dashboards and data-driven content curation, sets Stupa apart in the media landscape.





EnterpriseTech

Encompassing a range of DeepTech solutions including Cloud infrastructure, Enterprise Mobility, DevOps, Collaboration tools, Business Intelligence, Remote working tools, AdTech, MarketingTech, Automation, CRM, and SCM.

Adagrad



Vision to Decision with Scalable AI

Product Name: Superview

Founder: Niranjan Patil, Managing Director

Website: <https://www.adagrad.ai>

Problem Statement

Vehicle Analytics is required for Customer satisfaction, Risk management and Productivity Enhancement in Transportation, automobile and Security/Surveillance Segments. Current vehicle analytics solutions are either inaccurate or unaffordable, causing industries to rely on outdated technologies like RFID. This limitation hinders security, transportation efficiency, and innovation in vehicle analytics across various sectors.

Product Innovation

We've engineered a robust vehicle analytics platform that runs on palm-sized edge devices yet captures an unparalleled range of vehicle attributes. From license plates and colour to make/model, axle count, orientation, and direction of travel everything required for comprehensive vehicle analytics. The technology, developed in Pure C/C++ with Gstreamer, offers unparalleled vehicle analytics with human-level accuracy on minimal hardware. It captures comprehensive vehicle attributes, optimized for edge computing. Adaptable for diverse use cases and global license plates, our solution sets a new industry standard, ensuring versatility and future-readiness.

Awidit Systems



Product Name: Awiros Video intelligence Platform and Application Suite

Founder: Vikram Gupta, CEO

Website: <https://www.awiros.com>

Problem Statement

Deep Learning and AI is one of the most active research today, and enterprises are looking to adopt many video AI "use-cases" for automation of visual tasks. However, development and deployment of Video AI use-cases is done through un-scalable independent point solutions, lacking ease of development or deployment.

Product Innovation

Awiros is a comprehensive platform in the form of an OS to ease the development and deployment of Video AI Apps, addressing diverse customer needs quickly. Awiros' Marketplace, the Appstack, bridges the gap between customers (demand) and developers (supply). Proprietary Video AI SDK ensuring 10x faster application development and hardware interoperability; ease of deployment on a large infrastructure using Kubernetes and Containers. More than 70 ready-to-use apps for the customers; community-driven marketplace for ease of development and discovery are its USPs.



Bert Labs

Bert Labs

Product Name: Bert Platform Solution

Founder: Rohit Kochar, Executive Chairperson & CEO

Website: <https://www.bertlabs.com/>

Problem Statement

Bert Labs is focused on helping Corporations achieve their Digital Transformation Goals and Business Transformation Goals on ESG, Sustainability, Energy & Carbon, Productivity, and Thermal Comfort for through its Proprietary, Patented Artificial Intelligence-Deep Neural Network-Deep Reinforcement Learning-Distributed Computing-IoT powered Bert Platform Solution. And create exponential value for their customers and shareholders.

Product Innovation

Bert Labs' Bert Platform Solution is an AI – Digital Twin – Distributed Computing - IoT powered, 360°, fully automated, integrated controls solution, where Bert Optimus (Reinforcement Learning) – Bert Geminus (Operation Digital Twin) - Bert Nova (storage, processing, visual analytics) - Bert Maximus (sensing) - Bert Qrious (transmission) work seamlessly with each other. Bert Labs' incorporates reinforcement learning and multi-agent-based AI platform solution, and 360° fully automated closed loop control, which is not offered by any other company globally. First Principles (Physics, Chemistry, and Biology) and data driven models are integrated as part of a multi-agent global RL framework, a global first.

Dista



Product Name: Dista Sales

Co-Founders: Shishir Gokhale, CEO; Deepak Garg, CTO; Nishant Kumar, CPO

Website: <https://www.dista.ai>

Problem Statement

Businesses and consumers are expecting doorstep services/f2f interactions and thus generating volumes of geodata. Leaders now want to understand this data and design their business growth with location as a strategic dimension. They are looking at partners to help them make sense of their geo-data thus arriving at the need to explore Location Intelligence for visualization, strategy & field operations.

Product Innovation

Dista's location intelligence framework helps business leaders to Visualize, Strategize and Operationalize their end-to-end field operations. This is orchestrated by our product suite for field sales, servicing, deliveries and geospatial insights. Our custom SaaS products are built on our own low-code/no-code platform that employs several in-house patent-pending and patent-granted algorithms. For organizations that have lat/long relevant to their decisioning, or if they have field assets or field job runs and assignment, scheduling or routing critical to their business; then they need to turn to Dista's location intelligence platform. Our low-code/no-code platform is designed to help leaders visualize, strategize and operationalize all of their field operations. It employs patented algorithms, is highly configurable, API-friendly, multi-tenant and SOC2 compliant and designed to meet the needs of enterprise leaders.



ParamNetwork



Product Name: Param

Co-Founders: Vaideeswaran Sethuraman, Founder & CEO; V K Pradeep, Head of Field Engineering & Growth
Kumar Balla, Head of Engineering

Website: <https://param.network>

Problem Statement

Traditional supply chain collaboration is slow and lacks real-time visibility. ERP disconnects breaks the seamless exchange of essential information, leading to suboptimal decision-making and planning. With globalization, the supply chain has become a complex web of manufacturers, suppliers, distributors, and retailers, each with its unique requirements and technological capabilities.

Product Innovation

{param}, a tailored supply chain collaboration platform, empowers businesses with custom app creation, process optimization, and informed decision-making. The Smart Data Lake Platform, featuring a knowledge graph and Generative AI, elevates beyond workflow digitization. With proprietary technology, scalability, and integration capabilities, {param} delivers adaptive innovation. Ensuring data integrity and fostering trust, it offers a transformative supply chain solution with comprehensive, intelligent enterprise app development for enhanced efficiency and security.

Print2b Tech



Product Name: DocChain.io

Co-Founders: Joji Varghese, Founder and CEO; Vignesh Babu, Co-Founder and Head - Technology

Website: <https://www.print2block.com>

Problem Statement

In today's digital era, reliance on centralized systems with traditional databases hampers document verification, introducing complexities and delays. Digital document usage has become pervasive, but the dependence on a single authority for verification remains slow and inefficient. Document and record fraud pose significant challenges, leading to financial losses. Current methods lack foolproof trust infrastructure, often relying on laborious manual processes. A more efficient and secure digital document issuance system is essential to address these challenges and enhance trust in the digital landscape.

Product Innovation

Print2Block, a Web3.0 startup, addresses real-world challenges with Deep Tech solutions. Their blockchain-based product, DocChain.io, and advanced USB hardware device for issuing Digital Documents create a secure, verifiable platform for records. DocChain ensures instantaneous verification, immutable trust, elimination of intermediaries, privacy compliance, and scalability. With over 58 million documents generated, including 37 million Covid-19 test certificates in Maharashtra, Print2Block's innovative approach combines blockchain's security with internet openness, giving them a competitive edge in document verification and authenticity assurance.





FinTech

Businesses harnessing advanced technology to improve or automate financial services and processes, including subcategories like Digital lending, WealthTech, Insurance, Cryptocurrencies, Payments, and Investment Tech, all with a focus on deep tech innovation.

Saarthi.AI

Saarthi .ai

Product Name: PRAVID.IO

Co-Founders: Vishwanath Jha, CEO and Sameer Sinha, CTO

Website: <https://saarthi.ai/>

Problem Statement

We combat inefficiencies, opacity, and regulatory challenges in debt collection posed by human-led telecalling, hypergrowth in lending, and evolving RBI guidelines for all tiers of the market. Even through lending industry spends \$8Bn annually, these issues hamper CX, erode market valuations and cause legal, financial and brand damage.

Product Innovation

Revolutionizing omnichannel campaigns, our Communication AI PaaS employs a Multilingual AI Specialist to streamline drip-style campaigns across Call, WhatsApp, SMS, and email, eliminating the need for multiple telecallers. Offering seamless post-communication management, QA, and analytics, our platform incorporates a unique blend of behavioral, conversational, and generative AI. Achieving 2-way multilingual human-like communication with 99.6% disposition accuracy and <4% Dialogue Error Rate, it adapts strategies for users' evolving willingness, ability to pay, and risk profile. Our unified role-based platform serves as a comprehensive solution for contact center, strategy, operations, and compliance needs of financial enterprises.

VuNet Systems



Product Name: vuSmartMaps

Co-Founders: Ashwin Ramachandran, CEO and Bharat Joshi, CPO

Website: <https://vunetsystems.com>

Problem Statement

In a rapidly expanding digital banking landscape, delivering an exceptional user experience is vital. Growing complexity and transaction volumes necessitate comprehensive observability to mitigate failures, optimize speed, and prevent revenue loss, customer attrition, and brand reputation risks.

Product Innovation

VuNet addresses this challenge with vuSmartMaps™, a full-stack business journey observability platform. It offers end-to-end visibility into complex digital journeys, such as instant payments and lending, empowering teams to reduce failures, improve transaction speeds, and access real-time business metrics. VuNet enables proactive monitoring, analysis, and optimization, improving user experience and reducing disruptions for organizations. VuNet's innovative Big Data analytics platform offers real-time visibility across infrastructure and applications at scale, empowering businesses to bridge IT performance with tangible business impact. Its domain-centric adaptors and integrated MLOps engine provide proactive, intelligent insights, enabling data-driven decisions that drive operational excellence and user satisfaction.





HealthTech

Technological solutions developed with a focus on deep tech for the purpose of improving all aspects of the healthcare system, spanning telemedicine, online health information, non-invasive diagnostics, wellness programs, hospital administration tools, healthcare analytics, life sciences tech, and more.

Adiuvo Diagnostics

ADIUVO
DIAGNOSTICS

Product Name: Illuminate

Founder: Geethanjali Radhakrishnan

Website: <https://www.adiuvodiagnosics.com/>

Problem Statement

Globally acute, chronic, and traumatic wounds affect more than 500 million people. 280 million wound procedures are done annually pertaining to diabetic foot ulcers, venous ulcers, pressure ulcers, burn wounds and other SSTIs. Unfortunately, 70% of the wounds delay in healing due to infections and vascular issues. Current visual signs and symptoms to assess these parameters are only 57% percent accurate while the gold standard tests are cumbersome and expensive. Delayed wound healing causes more than 50 billion dollars in healthcare expenditure.

Product Innovation

Illuminate®, a groundbreaking imaging device revolutionizing wound assessment. It non-invasively detects infection, analyses tissue in 2 minutes, and employs machine/deep learning to classify bacteria gram type. 100 times faster than traditional tests, Illuminate® aids in swift first-line treatment, enhances antibiotic stewardship, accelerates wound closure, and improves vascularization. This cost-effective, patented innovation is compact, offering a world-first solution for comprehensive wound assessment, particularly in low-resource settings.

Alfaleus Technology



Product Name: Intelligent Vision Analyser Plus

Founder: Sandal Kotawala

Website: <https://alfaleus.in/>

Problem Statement

Globally 76 million people are affected by glaucoma. The current visual field perimetry for glaucoma detection utilizes heavy and costly machines that are uncomfortable for the patients which are available at institutional level or big private hospitals and hence rural outreach is a bit difficult.

Product Innovation

"iVA+", the Virtual Reality-based technology, providing affordable and comfortable eye tests for widespread accessibility. Priced 10 times lower than conventional devices, it empowers doctors to increase testing across all societal levels. Its portability allows screenings in remote areas, eliminating the need for an eye patch or dark room. iVA+ offers a patient-friendly experience, revolutionizing eye examinations without compromising accuracy and efficiency.



Arficus



Product Name: Medhini

Co-Founders: Sandeep Sinha and Anurag Jain

Website: <https://arficus.com/>

Problem Statement

Underserved communities face exacerbated healthcare challenges due to systemic inequities, poverty, and limited access. Delayed diagnosis, compounded by factors like conflict and natural disasters, leads to higher mortality. Emerging diseases demand advanced technological access for preventive care, especially in remote areas. The absence of predictive diagnostics and a lack of healthcare facilities intensify the suffering of vulnerable populations, compounding their health struggles.

Product Innovation

MEDHINI, a pioneering Generative AI Diagnosing SAMD with 99.31% clinical accuracy. Catering to Neurology, Nephrology, Cardiology, Oncology, and Health Prognosis, MEDHINI ensures rapid, affordable, and accurate diagnoses. Its innovative tech stack includes MEDhSeg for brain structure segmentation, MEDhGbx for hybrid image processing, MEDhPredx for predictive neural modeling, and MEDhDx for hybrid markup data lakes. This award-winning platform transforms healthcare diagnostics, reducing turnaround time to 53 seconds and costs to less than \$7, even reaching remote areas globally.

Medevplus



Product Name: IXanner7vn a portable and adaptable OCT for early detection of retinal disorders

Co-Founders: Ravi Kiran Manapuram, Managing Director and Sweta Patnaik, Finance Director

Website: <https://medevplus.com>

Problem Statement

The lack of comprehensive primary care screening, coupled with the absence of high-precision, non-invasive 3D imaging solutions for both animal and industrial applications, along with the unavailability of affordable and portable OCT-based devices, poses a critical gap in healthcare and technology, hindering early detection and diagnostics.

Product Innovation

"IXanner", an affordable and portable OCT device offering efficient non-invasive 3D imaging solutions. Its precision enhances early detection and diagnosis, transforming primary care and industrial imaging. Proprietary spectrometer technology, protected by patents, ensures portability, lightweight design, and cost-effectiveness. With customization options to meet diverse end-user needs, IXanner stands out, bridging technology gaps and revolutionizing imaging across various applications.



Nexstem



Product Name: Nexstem Instinct

Co-Founders: Siddhant Dangi, CEO and Deepansh Goyal, CTO

Website: <https://www.nexstem.ai/>

Problem Statement

NexStem recognizes the daunting challenge of transitioning neuroscience research from laboratory settings to production-ready Brain-Computer Interface (BCI) use cases. Our solution is the creation of a dynamic ecosystem that empowers developers and researchers alike. With NexStem Instinct, we're introducing a groundbreaking comprehensive suite. At its core lies an advanced EEG recording headset endowed with formidable computing power to process intricate biosignals. This suite further boasts pre-defined developer libraries and SDKs designed to streamline BCI use case development. By offering a complete package that minimizes resource-intensive efforts, NexStem is revolutionizing the landscape of BCI technology.

Product Innovation

NexStem Instinct pioneers the BCI landscape with a cutting-edge EEG recording headset and robust computing capacity for seamless signal processing. Boasting 19 adjustable electrodes, it redefines accuracy and comfort, featuring an 8-core ARM processor and a 6 TOPS AI engine for unparalleled onboard power. Supported by AthenaOS and WisdomSDK, NexStem transforms BCI development, offering an ecosystem dedicated to innovation. Instinct goes beyond a product, embodying an innovative force reshaping the future of BCI technology.

Sascan Meditech



Product Name: OralScan

Co-Founders: Dr. Subhash Narayanan, Founder & CEO, Usha Subhash, Co-Founder & Director CRM

Website: <https://www.sascan.in/>

Problem Statement

Oral cancer poses a significant threat with over 1.3 lakh cases annually, but a mortality rate exceeding 50% is attributed to late detection using outdated methods like conventional oral examination (COE). The reliance on torchlight examination results in challenges locating malignant sites, prompting multiple biopsies, underdiagnosis, and delayed treatment. Affordable and precise clinical adjuncts with biopsy guidance can substantially reduce treatment costs and mortality rates.

Product Innovation

OralScan, a revolutionary multispectral imaging camera, employs multiple LEDs and a high-resolution monochrome camera to detect changes in tissue autofluorescence and reflected light, crucial for early oral cancer detection. A cloud-based ML algorithm processes real-time images, guiding accurate biopsy and histopathological diagnosis. Implemented by institutions like Tata Memorial Hospital and NGOs such as Ekohum Foundation, OralScan is the world's first handheld intraoral device, offering objective cancer screening, surpassing subjective methods.





Manufacturing & IndustrialTech

Products and solutions designed to enhance production processes, efficiency, and product quality, employing deep tech such as IoT, Robotics, 3D Printing, and Data Analytics to streamline manufacturing operations and enhance overall efficiency.

AugurAI



Product Name: AUGURAI

Founder: Ravishankar Rajagopalan, CEO

Website: <https://www.theauaugurai.com>

Problem Statement

Cost of Poor Quality is a major concern for manufacturers. 100% quality inspection is required in several cases and human inspections are error prone and also not possible in several cases. AUGURAI uses Camera based, AI enabled visual inspection for 100% quality assurance in manufacturing.

Product Innovation

The Optics First approach ensures a robust design of the Optical system that generates good quality images. This ensures the defects are always visible to the camera. These images are used by the state-of-the-art Computer Vision algorithms for real time defect detection in manufacturing. It's the combined power of Optics, AI, Automation and Robotics to build the most robust Visual Inspection solution.

mSense



Product Name: Digital Eyes and Digital Ears

Co-Founders: Shankar Maurya, Co-Founder CEO; Surekha Gupta, Co-Founder, CBO

Website: <https://www.msense.ai/>

Problem Statement

Enabling our manufacturing customers to achieve "Zero Defect Policy" by doing comprehensive automated QA/QC using non-contact visual inspection and non-intrusive inspection using sound.

Product Innovation

The products enable faster customization and reduced time to market for automated QA/QC using AI-Powered Digital Eyes and Digital Ears. Our products enable faster customization at lower cost and with less number of data samples. Our proprietary technology enables inspection using sound in open shop floor conditions.



Product Name: DeepInspect

Co-Founders: Aniruddha Banerjee and Avra Banerjee

Website: <https://switchon.io>

Problem Statement

Automotive and CPG companies employ 25%+ of their workforce for inspection and yet face 500+ customer complaints per year per site leading to \$120M+ in losses.

Product Innovation

Quality Inspectors can train the DeepInspect system to inspect ~150-micron defects at 1200+ parts/min with ~100% accuracy and <0.5% false positives. It is the first product where the customers can train AI-models on their own and deploy the system within days with <200 good images used for training. This unique platform hence reduces time-to-value from 6+ months to 3-days.



<https://nasscom.in/emerge50/>



Media and Telecommunications

Advanced technologies transforming telecommunication, entertainment, and media. Includes DeepTech solutions for data transmission, voice communication, digital platforms, streaming, and content creation. Revolutionizing media production and consumption.

Product Name: VisualDub

Co-Founders: Mandar Natekar, CEO; Subhabrata Debnath, CTO; Anjan Banerjee, CPO

Website: <https://visualdub.ai>

Problem Statement

Imagine that you are watching a Korean film with English audio. Visual Discord gets created because your audio and visual cues are not in sync, you are listening in English but the actors visually appear to speak in Korean. This takes away the authenticity of the content and makes it non-relatable to the viewer. Now, what if what you watch and what you hear are in perfect sync?

Product Innovation

VisualDub, equipped with patented technology and a unique algorithm, revolutionizes film localization. Its proprietary system harmonizes the lower jaw movements, including smile lines, cheek muscles, mouth, chin, lips, and upper neck, with dubbed audio. This groundbreaking process transforms the visual experience, making it appear as if the film was originally shot in the dubbed language. VisualDub, ensuring studio-quality lip-sync, provides content creators and distributors a significant advantage in global localization and distribution. Its language-agnostic approach and artifact-free results set it apart.



<https://nasscom.in/emerge50/>



RetailTech

The integration of deep tech in retail, offering solutions that encompass Computer Vision, Customer Experience enhancements, E-commerce enablers, In-Store RetailTech, E-commerce logistics, and Immersive FashionTech, among others.

MirrAR

(Styledotme Fashion and Lifestyle)

MIRRAR

Product Name: mirrAR

Co-Founders: Meghna Saraogi, Founder and CEO; Lalit Vijay, Co-Founder and COO

Website: <https://www.mirr.com/>

Problem Statement

Traditional shopping experiences, whether online or in-store, lack personalization, accessibility, inclusivity, and sustainability. Online shopping faces reduced confidence in product selection and higher return rates. In-store shopping faces challenges like decentralized inventories, out-of-stock SKUs, and difficulties in trying on certain products, such as cosmetics and jewellery, leading to time-consuming selection processes.

Product Innovation

mirrAR revolutionizes shopping with a no-code/low-code platform, transforming 2D/3D assets into AR and AI-powered try-on experiences. Offering WebAR, Mobile Apps, In-store, and Social AR solutions, mirrAR ensures a seamless virtual shopping journey. Its robust DIY Platform supports 300k+ inventory uploads and 12 million try-ons, while emotional analysis-driven recommendation AI enhances customer engagement. With precise face tracking and a patented detection process, mirrAR stands out, attracting clients and maintaining a flawless retention record.

NeuroPixel.AI Labs



NeuroPixel.AI

Product Name: ModelSwap

Founder: Arvind Nair, Co-Founder & CEO; Amritendu Mukherjee, Co-Founder & CTO

Website: <https://www.neuropixel.ai/>

Problem Statement

The process of creating high quality catalogue images is slow, expensive and operationally intensive. It typically involves models, photographers, stylists, make-up-artists and post-production editors. We hyper-simplify this process by removing some expensive stakeholders while simultaneously improving the output quality and reducing costs by over 50%.

Product Innovation

ModelSwap, the innovative product empowers customers to shoot apparel on any person and seamlessly replace them with a conventionally beautiful model of any ethnicity. Going beyond, we immerse products in diverse environments, optimizing lighting for a higher ROI on digital ad spends. With a proprietary algorithm, including three filed patents and two in progress, we employ GANs, latent space classifiers, and optical flow networks for synthetic human generation and apparel warping, ensuring unparalleled visual transformations.





Supply Chain & Logistics

A category including DeepTech solutions and products for supply chain and inventory optimization, with use cases like shipment tracking systems, last-mile delivery solutions, automated drone delivery, GPS tracking, and vehicle monitoring.

ATAI Labs



Product Name: ATCO

Founder: Gangadhar Gude, CEO

Website: <https://www.atai.ai/>

Problem Statement

Maritime and Logistics industries are geared for significant growth along with increased customer expectations but are plagued by operational inefficiencies. These can be addressed through automation and digitalization using applied AI methodologies. This will lead to capacity augmentation and operational efficiency along with transparency resulting in lower operational costs and improved customer satisfaction.

Product Innovation

ATAI excels in end-to-end digital transformation through seamless integration of technology, platforms, and digitalization. Their AI and deep learning expertise ensures accurate data collection, task automation, optimized operations, real-time visibility (Operational Digital Twin), and data-driven decision-making. Boasting 100% operational coverage, leading accuracies (>98-99%), and a comprehensive one-stop solution, ATAI outpaces competitors with unmatched project execution speed, OpEx business model, and pioneering SLAs for customer KPIs, enhancing efficiency and customer satisfaction.

Blurgs Innovations



Product Name: Trident - A maritime domain awareness and automation platform

Co-Founders: Roshan Raj, CEO; Manik Sharma, CTO; Avinash Kori, Chief Scientist

Website: <https://www.blurgs.com/>

Problem Statement

Unlocking the full potential of our oceans is hindered by their unpredictability and limited exploration. However, the growing availability of digital data in the maritime sector offers the chance to innovate, optimize processes, and advance our awareness and management of this vast and dynamic environment.

Product Innovation

The solution tackles maritime challenges by integrating AIS, radar, optical imaging, and remote sensing data for actionable intelligence. Covering port traffic control, ship protection, search and rescue, surveillance, and asset management. The unique approach combines diverse data sources with advanced automation and massive-scale machine intelligence in near real-time. It streamlines maritime operations, empowering authorities with enhanced domain monitoring, safety, and global activity insights for informed decision-making and comprehensive worldwide perspectives.



Product Name: RoadAthena

Co-Founders: Manav Singal, CTO and Co-Founder; Prerna Kalra, CEO and Co-Founder; Dr. Rahul Kalra, Chief Growth Officer

Website: <https://roadathena.com>

Problem Statement

With India's vast 63 lakh km road network, human monitoring is impractical, leading to poor maintenance, accidents (25,000/yr), and deaths (3,000/yr) from potholes. Only 2% are NHAI toll roads with infrequent surveys. Rural roads form 72% of the network. A cost-effective, automated, and transparent continuous monitoring solution is imperative to address diverse road conditions and enhance safety.

Product Innovation

RoadAthena, is the AI-based solution revolutionizing road anomaly detection. Utilizing a proprietary dataset from narrow rural roads to expressways, this integrated hardware device captures synchronized video and GPS data. Automated AI model processes this information, generating detailed anomaly reports, dashboards, and linear plots. Offering road condition classification and anomaly area data, RoadAthena aids budget prioritization for road asset owners. Unique dataset and trained AI, minimizing false positives, have resulted in two filed patents. Monitoring, safety, and global activity insights for informed decision-making and comprehensive worldwide perspectives.



<https://nasscom.in/emerge50/>



Sustainability

Innovative products and solutions that employ DeepTech to address environmental, social, and economic challenges, with the goal of promoting long-term well-being and ecological balance. This category includes deep tech-driven sustainable energy technologies, eco-friendly practices, and data-driven solutions for a more sustainable future.

AUI Systems



Product Name: Cognitive Energy Analyzer

Co-Founders: Harpal Parmar, CEO; Shashi Kiran, CTO; Manmohan Singh, COO

Website: <https://www.auisys.com>

Problem Statement

The Upstream Energy industry struggles to comprehend and quickly leverage massive numbers of complex, drilling and subsurface industry reports reported in unstructured and natural language form - to help address \$8 Bn of annual drilling downtime. Current AI/ML/NLP approaches to automate understanding of these reports have been sub-optimal.

Product Innovation

The Cognitive Drilling Analyzer automatically understands complex industry documents at more than 90% accuracy, and at scale. It uses proprietary knowledge based A.I. and helps engineers and managers obtain superior insights into potential risks and field issues, while savings 75% human effort. AUI's proprietary IP in knowledge-based A.I. is built from scratch with no commercial dependencies. The natural language understanding engine paired with a semantic knowledge base are unmatched in accuracy (90% plus) and explain-ability (100%). It operates far ahead of other AI/ML/NLP type systems due to its symbolic A.I. nature and has a tiny computing footprint.

Clairco



Product Name: Clairco clean air and energy efficiency as a service

Co-Founders: Aayush Jha, CEO and Udayan Banerjee, CPO

Website: <https://www.clairco.in/>

Problem Statement

Rapid urbanization and population growth exacerbate air pollution, climate change, and pandemic risks. Commercial building air conditioning alone contributes to 8% of global carbon emissions. Indoor air quality is often worse than outdoors, with increased pathogen transmission indoors. Hence, worldwide, commercial buildings seek to cut emissions and enhance indoor air quality.

Product Innovation

Clairco pioneers an innovative solution, transforming indoor air quality without the need for costly HVAC retrofits. Their revolutionary approach combines proprietary nano-tech air purification and AI/ML-driven IoT energy savings, setting them apart from conventional integrators. Offering a Zero-CapEx model with immediate ROI, Clairco guarantees WHO-standard air quality and 15-18% energy savings. This distinctive innovation has garnered global recognition, with a client roster including Capitaland, Brookfield, EMAAR, and others, impacting over 3 lac individuals daily while saving an impressive 22,500 tons of CO2 emissions annually.



Fluxgen Sustainable Technologies



Product Name: AquaGen (IoT and AI based digital water management)

Founder: Ganesh Shankar, CEO

Website: <https://fluxgen.com>

Problem Statement

The increasing cost of water, driven by groundwater depletion and charges for overuse, is compounded by expenses for cooling, heating, pumping, purification, and RO. Compliance with mandatory zero liquid discharge policies is affecting industries with potential shutdowns. Low water levels pose climate risks, impacting industry and economic growth. Pollution Control Boards enforce water monitoring, and certification for food safety in the food industry depends on effective water management.

Product Innovation

AquaGen by FluxGen optimises water management by collecting real-time data from digital flow meters and level sensors. Its AI-driven monitoring and integration enhance infrastructure efficiency, identifying and correcting water inefficiencies. Users receive insights via the mobile app and email reports, reducing non-revenue water loss and enabling accurate total water usage calculations. FluxGen stands out in water management with its innovative AI algorithm for pinpointing inefficiencies, faults, and consumption trends. The plug-and-play IoT devices simplify integration with existing water infrastructure, offering seamless installation. This not only reduces costs but also streamlines the digitization process for industries.

LivNSense Technologies



Product Name: GreenOps - Leading the path towards Carbon Neutral Operations

Co-Founders: Avnish Kumar, CEO and Priyanka Kumar, COO

Website: <https://www.livnsense.com>

Problem Statement

Industries with high energy consumption contribute to 35% of global CO2 emissions, heavily relying on fossil fuels and causing carbon lock-ins. Enhancing process efficiency and minimizing carbon emissions could globally recover up to \$200 billion in incremental revenues annually for these energy-intensive industries.

Product Innovation

The product innovation of GreenOps™ lies in its unique approach to energy balance through AI, digital twins, and 5G, targeting decarbonization across the process value chain. It integrates with operational and information technology systems, capturing real-time process data and generating predictive recommendations for operators using process digital twins. Notably, GreenOps™ optimizes energy consumption, ALF3, and production efficiency in aluminum smelter plants, achieving a significant reduction of 1 MT CO2e footprint per ton of metal production. In the cement industry, the platform improves Alternative Fuel (AF) usage, increasing AFR% from 20% to 45%, and reducing coal consumption by 17%. Successful pilots in the US market demonstrate its effectiveness in large-scale production.



Product Name: Minion Energy Management Solution

Co-Founders: Gokul Shrinivas and Jeyakumar N

Website: <https://www.minionlabs.tech/>

Problem Statement

MinionLabs solves the challenge of inefficient energy consumption in commercial and industrial facilities, enabling substantial cost savings and reduced environmental impact.

Product Innovation

Minion Energy Management Solution optimizes energy consumption, empowering facilities to cut energy costs by up to 30%, boost productivity, and reduce their carbon footprint through sensor-less, data-driven insights and actionable recommendations. Minion's unique innovation lies in its sensor-less approach, eliminating the need for costly equipment-level sensors. Instead, it leverages energy signature recognition, optimizing energy usage, and reducing both capital and operational expenses for businesses.



<https://nasscom.in/emerge50/>

Selection Framework

nasscom

Knowledge Partner

zinnov

740+

Applications overall

Applications were received for the nasscom Emerge 50 Awards 2023 on a predefined questionnaire/application form

The applications were then validated based on eligibility criteria:

- Indian origin
- Nominated product should be commercialized (not an idea / prototype / under development)
- Company's revenue should be less than 100 Crore

Primary Screening

510

Qualified the eligibility criteria

In-depth Evaluation

86

short-listed as potential

- Zinnov team then prepared a mathematical model to rate and analyze the applications
- Applications were analyzed on several parameters including financials, growth, market differentiation, product differentiation, market size, usage of advanced technology.
- 86 companies were listed as potential companies for further detailed evaluation.

- The short-listed companies were called to present to a panel of Jury, all virtual this year.
- The Emerge 50 companies were selected after a critical & rigorous evaluation by the Jury panel based on Innovation & Differentiation quotient, Technology Stack & Depth, Research & Collaboration, Product Maturity, Execution/Business Maturity, Team and Addressable Opportunity.

50

final winners!

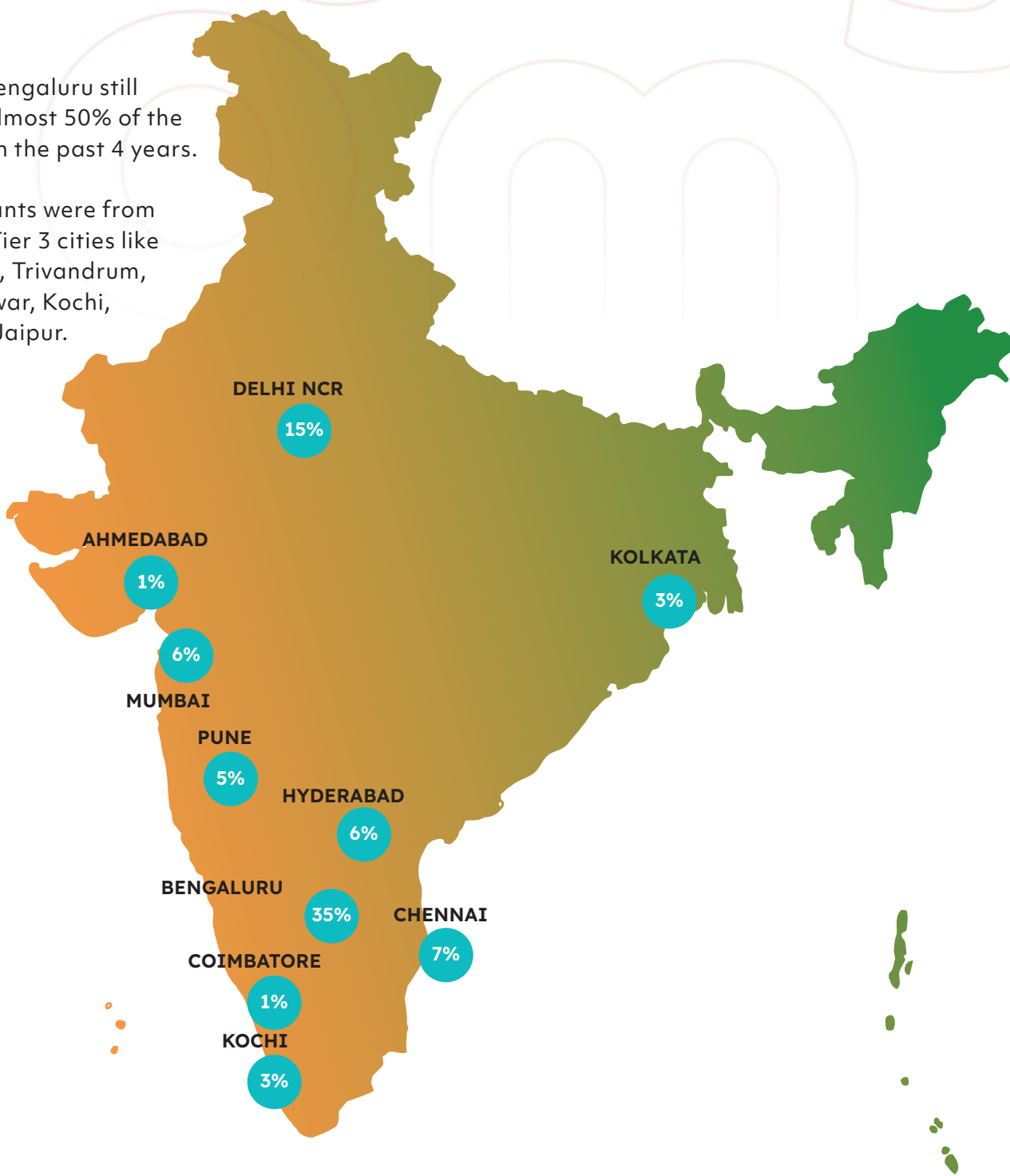
Jury Evaluation



Stages of Evaluation

Key Trends & Analysis

- Delhi and Bengaluru still constitute almost 50% of the applicants in the past 4 years.
- 20% applicants were from Tier-2 and Tier 3 cities like Coimbatore, Trivandrum, Bhubaneshwar, Kochi, Indore and Jaipur.



Application Spread

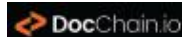
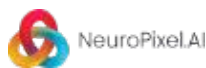
Knowledge Partner



League of 10 Winners



Winners



Jury Members



Abhishek Srivastava

Director,
Endiya Partners



Aditya Aggarwal

Industry Leader,
Maruti



Ajay Mulkalwar

Industry Leader,
Globant, India



Akhilesh Agarwal

AVP,
Pi Ventures



Amit Khanzode

Director,
Groplis



Amitabha Bandyopadhyay

Prof and in-charge,
IIT Kanpur



Anant Sood

Co-Founder,
Worxogo



Aniketh MJ

AVP, Investments,
Ideaspring Capital



Anil Joshi

Managing Partner,
Unicorn VC



Aniruddha Amarnath

General Manager, PMT,
Vitesco Technologies



Anupam Saronwala

Advisor &
Angel Investor



Arun Seth

Board Member
Narayana Health,
Mentor, Investor



Ashutosh Pastor

Sr. Manager and
Head, Incubation,
FITT, IIT Delhi



Baba

Investment Associate,
Waterbridge VC



Bhat Dittakavi

CEO,
AI4ICPS



Chintan Bhuva

Chief Information
Security Officer
South Asia, Swiss Re



Chintan Mehta

Partner,
CXO Connect



Deepak Gupta

Senior Managing Director,
TIAA



Derick Jose

MD - Applied Intelligence,
Flutura



Devadas Shetty

Vice President,
Schneider Electric



Dhiraj Jain

Co-Founder & CEO,
Dot Konnekt



Dipika Kapadia

Senior Director of
Product Management,
Flipkart



Divya Sharma

Sr. Director
Product Management,
Salesforce



Dr Kalliat Janardhan

Visiting Consultant
Gastrointestinal Surgeon,
Manipal Hospital



Jury Members



Dr Lakshmi Jagannathan

CEO,
Derbi Foundation



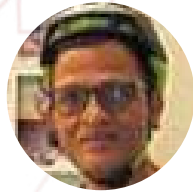
Dr. Raveendra Rengaswamy

Deputy General Manager,
Daimler Truck
Innovation Centre India



Dr. Saumya Badgayan

VP HR Business Strategy,
Gold Star Jewellery
Pvt Ltd



Ganesh Subramanian

Founder & CEO,
Stylumia



Gaurav Makkar

Technical Director,
CTO Office,
Netapp



Girish Raghavan

Vice President
Of Engineering,
Fiserv



Gokul KS

Partner,
Upekkha



Guddeti Bharath Reddy

SVP IT, Security &
OneTechOps,
Flipkart



Jaya Vaidhyanathan

CEO,
Bahwan Cybertek



Jeyandran Venugopal

Chief Product and
Technology Officer (CPTO),
Flipkart



Jinosh K M

AGM -Technical Project
Management,
Vitesco Technologies



Kapil Agrawal

Vice President,
Chubb India



Kartikeyan Ramamurthy

Director-Amadeus Labs,
India Ambassador-
PMO Global Alliance,
Amadeus



Kaustubh Patekar

Founder,
ProdZen



Kavita Gopal

VP,
JP Morgan Chase & Co.



Madhurima Agarwal

MD
Microsoft



Manav Garg

CEO & Founder,
Eka Software Solutions



Mansi Aggarwal

Partner,
Alkemi VP



Mayuresh Raut

Co-Founder and
Managing Partner,
SEA Fund



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Software products
(India and Europe),
Intel



Narayanan

Founder & CTO,
VaNaShRi
Technology Consulting



Narendra Bhandari

General Partner,
SEA Fund



Naveli Jain

VP Investments,
Ankur Capital Fund,
Ankur Capital



Neelima Raj Sharma

Head of I,M&T
Vitesco Technologies



Jury Members



Parag Dhol

General Partner
Athera VP



Paritosh Anand

Senior Vice President &
Head - Digital Platforms,
Reliance



Poyni Bhatt

CEO,
SINE IIT Bombay



Pradip Kumar Das

Sr. Director Engg.
Honeywell



Pramod Jajoo

SVP Technology and
India Country Head
Flipkart



Priyank Garg

Managing Partner
IAN



Pulkit Dak

AVP, Investments
Pavestone



Raj Nayan Dutta

VC,
Waterbridge



Ramakrishna Sundaram

MD
JP Morgan



Richa Natarajan

Partner,
UC Impower



Roopa SunderRaj

Vice President
Global Head of Engineering
VMWare



Rostow Ravanan

Chairman and CEO,
Ex Mindtree



Rudresh B V

General Manager,
Vitesco Technologies



Rutul Joshi

Vice President,
Fidelity Investments



Sahil Makkar

Vice President,
India Quotient



Sandeep Sahgal

Vice President supply chain
planning logistics,
Schneider Electric



Sanjeev Kumar Ramineni

Engineering Director,
Swiss Re



Seema Joshi

Director
Product Management,
NICE Ltd



Shalini Sankarshana

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and Country Manager,
Planview



Shilpa Sree Nayak

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Shrinivas Gorur

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Target



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Somshubhro (Som) Pal Choudhury

Partner,
Bharat Fund



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IdeaCapital Ventures



Sujata Krishnan

VC,
Arali Ventures



Sunil Cavale

Investment Associate,
Speciale Invest



Surabhi Purwar

Principal,
Titan Capital



Sushma Kaushik

Partner,
Aavishkaar



Teena Jesani

Head - Wholesale Credit,
John Deere India



Trivikram Prasad

Chief Architect,
L&T Technology Services Limited



Utkarsh Rai

Leader



V Laxmikanth (VLK)

Managing Partner,
Pavestone



Valli Bollavaram

Chief Technology Officer,
Swiss Re



Varchas Subrahmanya

Director of Products
Director of Products,
ADP



Venkatesh Hulikal

VP,
Mentor



Vinay M K

Executive Director,
LYTX INDIA



Vinayak Hegde

CTO-in-Residence at
Microsoft for Startups



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VP, Investments,
Ankur Capital



Vishal Nagpal

Analytics and
Data Science Leader,
Amazon



Vishesh Rajaram

Co-Founder and
Managing Partner,
Speciale Invest





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DeepTech Companies

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