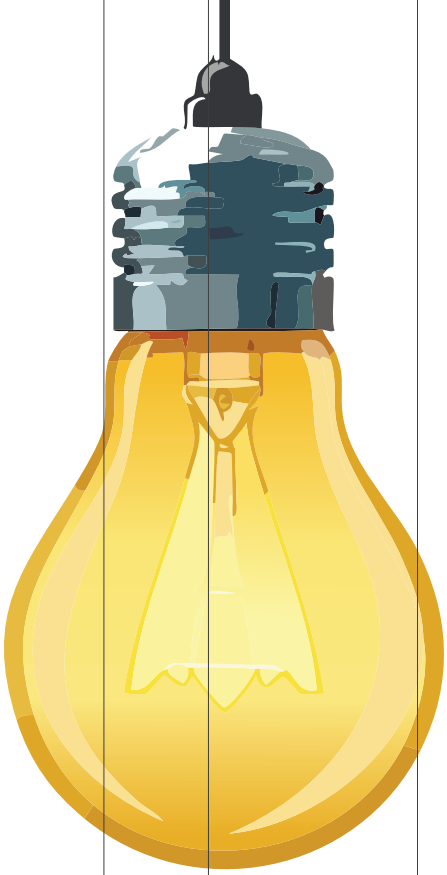


Update on

Entrepreneurship Initiatives

@IIT Gandhinagar

The entrepreneurship programs at IIT Gandhinagar have been steadily growing, fostering a dynamic ecosystem for aspiring entrepreneurs. The recent establishment of Anu and BV Jagadeesh Chair in Entrepreneurship has given a fresh impetus to our efforts, enabling us to reassess and enhance our existing initiatives. This has allowed us to refine our approach and introduce new programs focused on awareness, motivation, structured learning, and hands-on entrepreneurship.

Over the past year, we have organized numerous programs and activities to nurture entrepreneurial talent. With the support of this endowment, we have expanded our efforts to offer curricular interventions, enriched extracurricular activities, and structured support systems for start-ups. Several new initiatives have been launched, and more are planned in the coming months to further strengthen IIT Gandhinagar's entrepreneurial ecosystem.

Our initiatives are broadly categorized into Curricular Interventions, Non-curricular Interventions, and Industry/Institutional Partnerships, each tailored to inspire, educate, and empower:

1. **Curricular Interventions:**
    a. *Experiential entrepreneurship*- A project course for students
    b. *Laboratory in Entrepreneurial Motivation (LEM)*- a New Elective course
    c. *An Introduction to Business, Organization & Finance*- a New Elective Course
    d. *Fundamentals of Finance* workshop for faculty members and researchers
    e. *World of Engineering*

2. **Non-curricular interventions for promoting a culture of creating new things, inventions, and problem-solving**
    a. Hackathons to foster creativity and problem-solving
    b. Exposure program to inspire and promote innovation

3. **Industry/ Institutional- Partnerships:**
    a. Collaboration with Boeing for *Boeing BULD*
    b. Establishment of the *Co-innovation Center*

1. Curricular Interventions:

Objective: To create a culture of Innovation and entrepreneurship among the Students, faculty, and researchers

a. Experiential entrepreneurship- A project course for students

As part of the B.Tech curriculum, students have the option to take project courses beyond their technical domains. With a growing number of faculty members interested in starting companies, there is a clear need for support in market research, business plan development, and commercialization strategies. Recognizing this opportunity, IIT Gandhinagar has introduced a project course on experiential entrepreneurship, where students work in teams to develop business plans for faculty-led start-ups.

This initiative offers a unique opportunity for students to gain hands-on exposure to the start-up ecosystem, even if they do not have their own business ideas. By working closely with faculty-led start-ups, students can contribute to market research, business planning, and commercialization strategies. At the same time, faculty members benefit from the students' efforts, as they receive valuable insights and support in developing their ventures. This collaborative approach fosters mutual growth and learning, bridging the gap between academia and entrepreneurship.

This semester, six students have enrolled in the program, forming two teams of three, each working with a faculty-led start-up.

b. Laboratory in Entrepreneurial Motivation (LEM)- a New Elective course:

This new full-semester four-credit course is designed to discover and strengthen those aspects of the personality that drive individuals to become entrepreneurial in any career or occupation.

The course covers different aspects of entrepreneurship: starting your own business; intrapreneurship, i.e., working in a company like an entrepreneurial manager with much freedom and much responsibility; social entrepreneurship (for example, that of Dr. Kurien or Baba Amte), etc. The course will also try to focus on the individual self and address questions like who am I, can I become a successful entrepreneur, “How” do I become a successful entrepreneur, what strengths of mine should I nurture and bring out to be a successful entrepreneur, etc.

This is a learning course and not a teaching course. This is a laboratory. Many outside speakers will be there. Some outside visits will also be made to factories and institutions. The idea is to provide the students with a certain first-hand/vicarious “experience”, which will enhance self-learning and discovery.

Shri Sunil Handa offers this course. Shri Handa has taught this course at IIM Ahmedabad for 20+ years, and many of his students are successful entrepreneurs. He is an alumnus of BITS

Pilani and IIM Ahmedabad; he founded a pharmaceutical company that became a significant player in IV fluid manufacturing globally.

The course was highly interactive, involving a number of industry visits, discussions with guest speakers who are entrepreneurs, motivational sessions, and one-on-one discussions between students and Prof. Handa.

The Course was offered during Semester II of the academic year 2023-24 and Semester I of the academic year 2024-25, with 35 and 20 students enrolled, respectively.

It will be offered again in the Semester 1 of the academic year 2025-26.

c. An Introduction to Business, Organization & Finance- a New Elective Course

In Semester 1 of the academic year 2024-25, we introduce another full semester four-credit course offering students an introduction to the world of business. The course is designed to instil an appreciation of the commercial environment. It includes exposure to the legal environment, organization and business processes, basic financial accounting required for running a business, evaluation of project opportunities, valuation of a firm/ how to make a firm attractive to investors, fundraising, and other topics relevant to running a business.

The content is comprehensive and aims to introduce a commercial sense in engineering students; the course span is focused on imparting practical knowledge rather than only theory, with real-life problem discussions and case studies gleaned both from running successful businesses, as well as turning around ailing organizations. This course is particularly beneficial for those interested in pursuing entrepreneurship, or those stepping into a corporate career.

Mr. Praveen Gupta offered the course, who is an experienced business leader with a proven track record of successful turnarounds in the auto component and industrial products sector. With his extensive experience in leadership roles within prominent multinational and Indian companies, he has effectively navigated the aftermarket and field service areas. Mr. Gupta is an alumnus of IIT Kanpur and IIM Ahmedabad.

The Course was offered during Semester I of the academic year 2024-25 with 35 students enrolled.

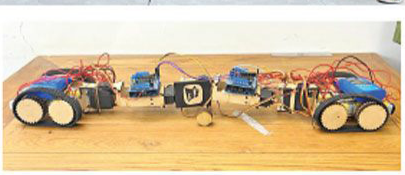
d. Fundamentals of Finance workshop for faculty members and researchers

Building upon the course offered to students, we have planned a shorter version for faculty, which is planned for April 4-6, 2025. This workshop aims to provide a foundational understanding of key financial concepts, including accounting fundamentals, financial control, project evaluation, product costing, and pricing strategies.

With a growing emphasis on entrepreneurship and technology commercialization within the academic community, financial literacy has become increasingly important. Over 11 faculty members at IIT Gandhinagar have already founded companies, highlighting the need for financial awareness in research-driven innovation. This workshop will equip participants with essential financial insights to support start-up creation, industry collaboration, and research project management.

e. World of Engineering:

To promote the culture of ‘Learning by Doing,’ IITGN recently started offering a course, ‘World of Engineering, ' to its first-year undergraduate students. The aim is to address challenges faced by individuals in various fields. It encouraged students to collaborate in multidisciplinary teams and develop technological solutions. The teams comprise 25-30 students each, and each team receives a meagre budget of ~Rs. 15,000/- to develop a prototype. Students came up with several innovative ideas. More importantly, they started utilizing their engineering skill in identifying and solving problems in teams.



PROJECT

SCALER

COST

RS 15,000

PROJECT

DROWSINESS DETECTOR

COST

Rs 12,000 for the prototype

PROJECT

EVAPORATIVE PELTIER COOLING TENT

COST

RS 15,000

The Batch of 2024 is currently engaged in this course and will present their ideas in April 2025

2. Non-curricular interventions for promoting a culture of creating new things, inventions, and problem-solving

To challenge students to take up problem-solving, inventing, and coming up with viable ideas to pursue entrepreneurship, the institute is undertaking a number of initiatives, including programs such as hackathons, technical events, Innovation-driven Entrepreneurship (IDE), etc.

a. Hackathons

This year, we organized a number of Hackathons at the National Level on specific themes. These hackathons gave students from IITGN and elsewhere the opportunity to work on real-life problems and pilot their solutions. In the last 1 year, the number of IITGN Students interested in participating in hackathons has increased a few (3-4 to 60+). Some of the hackathons are mentioned below:

i. **Hackathon on Smart Transportation Systems:**
IIEC Organized a 36-hour hackathon, "Hack the Future," sponsored by Japan's New Energy and Industrial Technology Development Organization or NEDO, from March 10th to 12th, 2024, bringing together developers, designers, and entrepreneurs to solve real-world mobility challenges. The Problem statements were provided by Gujarat Transport Department. Out of 190 applicants, ~50 students were selected to participate in the hackathon divided into 10 teams. The event began with an inaugural session and design thinking workshop, followed by continuous hacking and mentoring sessions. Evaluations and presentations took place on March 11th and 12th, with the final award ceremony concluding the event. Participants engaged in hands-on innovation, prototyping, and collaborative learning.

ii. **Hackathon on Fintech**:

IIEC organized another 24-hour fintech hackathon – Finnovate Hack 2024, on the 7th and 8th of July. The hackathon, held in partnership with GIFT City, was also supported by the Reserve Bank of India and IIMA Ventures. Out of around 150 applicants, 40 talented students from prominent institutions across the country were selected, and they worked on solving different problems related to financial fraud detection and financial literacy and easing the process of onboarding NRIs at GIFT City.

iii. **Flood AI Hackathon 2024**

In partnership with the Interdisciplinary Program in Climate Studies at IIT Bombay, a 24-hour hackathon was organized to address the critical issue of urban flooding. Held from August 24th to 25th, 2024, this event brought together students from across India to create innovative AI-driven flood management solutions.

Participants formed teams of four to five, blending diverse skills and perspectives. Eleven teams were given access to comprehensive datasets from real Indian cities, which they analyzed to develop insights for their solutions. Throughout the hackathon, participants received expert guidance from faculty in AI and urban planning, refining their ideas to create scalable and effective solutions.

Three teams were awarded prize money totalling ₹2 lakhs for their outstanding solutions to urban flooding. The winning team developed an app that predicts flood likelihood, extent, and duration. The runner-up team designed AI-driven strategies to forecast urban flood inundation and its impact on metro cities. The third-place team created an alert system to notify agencies in high-risk zones about upcoming floods.

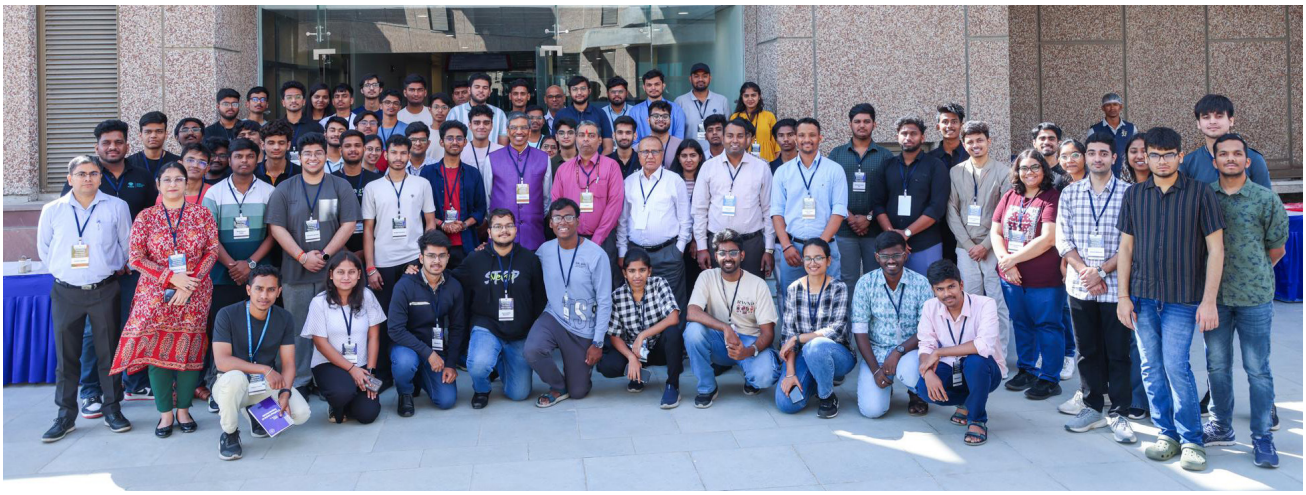
iv. **Smart India Hackathon 2024** – Software Edition – December 10 to 12, 2024
IIEC contributed in a 3-day hackathon called Smart India Hackathon 2024 (Software Edition) organized by AICTE, MoE. The grand finale of the Smart India Hackathon (SIH) 2024 started at IIEC, IITGN. Hon'ble Minister of Education, Shri Dharmendra Pradhan formally inaugurated the hackathon via video conferencing connecting participants from across the country. Prof Rajat Moona, Director, IITGN also congratulated the participants and commended their dedication and ingenuity in addressing real-world challenges.

A total of 37 teams, comprising 250 students, have worked on seven challenging problem statements, showcasing creativity, innovation, and teamwork.

A total of 10 teams have been announced as winners: 4 individual winners and six joint winners. The individual winners received a cash prize of Rs. 1,00,000 each, while the joint winners were awarded Rs. 50,000 each.

v. **Hack the Future 2025**:
IIEC partnered with the Ministry for Statistics and Program Implementation Govt. of India to organize a National Level Hackathon on problem statements in AI and Data Science. The hackathon will take place during March 21-23, 2025.

We received 1,000 plus applications and finally, 17 teams of 5 members each competed in 36-hour hackathon. These teams will work on three problem statements: a) Development of an AI/MI based predictive model for estimation of Monthly Per Capita Expenditure (MPCE) b) the Development of Semantic Search from text to National Industrial Classification Code and c)AI-based Legacy Data Extraction and Processing Tool.

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GOVERNMENT OF INDIA
MINISTRY OF STATISTICS AND PROGRAMME IMPLEMENTATION
IIEC
HACK THE FUTURE
Innovating Intelligent Data Insights
A National Hackathon to Unlock the Power of Data for Societal Impact
MARCH 21-23, 2025

b. Exposure program: IDE 5.0 Innovation Driven Entrepreneurship:

To cultivate creativity and entrepreneurial spirit among students, IIT Gandhinagar's Innovation and Entrepreneurship Center (IIEC) organized the 5th edition of the IDE program. A group of 14 students attended a national boot camp at Bangalore, India's thriving start-up ecosystem, from 25th March to 28th March 2024. This initiative empowers students to propose inventive concepts for potential business ventures. Selected ideas, innovations, and start-ups will receive structured support for further development and incubation.

Building on the experience of the previous editions, we have modified the program to make it more competitive as Ignite@IIEC IITGN. This will be an Entrepreneurship Acceleration Program aimed at empowering students to transform innovative ideas into scalable ventures. The program, structured to align with academic schedules, guides participants through ideation, proof of concept (PoC) development, market validation, and formal incubation. It includes hands-on workshops, mentorship, funding for prototyping, and exposure to global start-up ecosystems.

Running from March to November 2025, it culminates in a Demo Day where teams present their products/services to investors and industry leaders. The program is designed to foster entrepreneurial mindsets, support innovative ideas, and create impactful start-ups.

For students, it offers real-world exposure and skill development; for IITGN, it establishes the institute as a hub for innovation and attracts partnerships; and for society, it enables the creation of start-ups addressing critical challenges, aligning with national goals of fostering innovation and self-reliance.

3. Industry/ Institutional-Partnerships

a. BOEING BUILD:

Boeing BUILD is another interesting and impactful collaboration where IIEC, in partnership with Boeing, conducted the fifth edition. The program aims at identifying and supporting early-stage start-ups from academic institutions. Some of the highlights of the program include:

~160 applications from Gujarat, Rajasthan and MP
15 shortlisted teams attended an in-person boot camp at IITGN.
4 teams were further shortlisted, from 10 got the opportunity to participate in the National final at Boeing's R&D Center in Bangalore.

b. Co-Invention Centre Initiative

IIT Gandhinagar, in collaboration with I-Hub Foundation for Cobotics (IHFC) and the Technology Innovation Hub at IIT Delhi, has launched the Co-Invention Centre Initiative to inspire students to innovate and experiment with cutting-edge technology research and its practical applications.

This initiative is a significant step toward empowering the next generation by equipping them with the skills and knowledge needed to compete globally in deep technology domains such as robotics, artificial intelligence (AI), machine learning, the Internet of Things (IoT), and other emerging fields. Through this initiative, students will have the opportunity to explore, collaborate, and contribute to transformative technological advancements.

Conclusion- Building the Deep-Tech startup ecosystem at IITGN

The entrepreneurship initiatives at IIT Gandhinagar have significantly impacted students, faculty, and the broader ecosystem by fostering innovation, real-world problem-solving, and start-up creation.

Programs like Ignite@IIEC, hackathons, and experiential courses have equipped students with entrepreneurial skills, while collaborations with industry and alumni have strengthened IITGN's position as a preferred place to start a company.

A key focus of our efforts has been on supporting **research-driven start-ups, enabling the translation of cutting-edge research** into **real-world solutions with significant societal and economic impact**. Many of our faculty members and researchers are directly involved in such projects, which can lead to a successful spin-off. While these ventures often require longer gestation periods, their potential to drive transformative change in critical areas such as AI, robotics, IoT, health tech, and sustainable technologies is unparalleled.

As we look to the future, we are committed to strengthening this ecosystem by providing enhanced funding opportunities, access to domain experts and industry leaders, market access, fostering global exposure, and building deeper connections with industry and academia. Our goal is to ensure that IIT Gandhinagar remains at the forefront of deep-tech innovation, nurturing entrepreneurs who will not only create successful ventures but also address the world's most pressing challenges. Together, we are building a legacy of innovation, impact, and excellence.

Initiatives in the Pipeline

IT Gandhinagar is working on executing several forward-looking initiatives to strengthen its entrepreneurial ecosystem.

- **VC Fair** will connect start-ups with venture capitalists, providing funding opportunities and mentorship. We have planned VC fair in September 2025.
- **Start-up Factory** will serve as a dedicated incubation hub, offering resources, mentorship, and networking for early-stage ventures.
- **IITGN Young Innovators Program (IITGN-YIP)** will introduce a two-week immersive summer program in 2025 for students in grades 8-12.
- **Grand Challenges** in areas of fintech, health tech and agritech

	Monday		Tuesday		Wednesday		Thursday		Friday		Saturday	
	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN	FN	AN
Week 1	Introduction, Program briefing	Ice-braking session	Introduction to basic tinkering and product development	Tinkering exercise- Getting the hands dirty	Tinkering exercise- Getting the hands dirty	Tinkering exercise- Getting the hands dirty	First Idea pitching	First Idea pitching	Group activity	Group activity	Manthan- Teams to work on ideas	Manthan- Teams to work on ideas
Week 2	Technical evaluation of ideas- Prior art search	Technical evaluation of ideas- Prior art search	Mentor session/ Group Discussions	Mentor session/ Group Discussions	One-on-one Mentor session	One-on-one Mentor session	Pitch practice	Guest evaluation 1	Teams to work on mentor feedback	Teams to work on mentor feedback	Session- Business Model Canvas	Business Model Canvas- Group activity
Week 3	Session-Founder's mindset	Manthan- Teams to work on ideas	Session-Moon-shot Thinking	Manthan- Teams to work on ideas	Session- Identifying customer	Manthan- Teams to work on ideas	Manthan- Teams to work on ideas	Guest Evaluation 2	Session- Pitch deck essentials	Pitch deck essentials practice session	Visit to Incubator (CIIE_IIMA) and interaction with start-ups	Visit to Incubator (I-Create) and interaction with start-ups
Week 4	Mentor session/ Group Discussions	Mentor session/ Group Discussions	Mentor session/ Group Discussions	Session- Building the team	Teams to work on mentor feedback	Manthan- Teams to work on ideas	Manthan- Teams to work on ideas	Guest Evaluation 3	Session- Developing a successful PoC	Teams to work on mentor feedback	Interaction with start-up founders	Interaction with start-up founders
Week 5	Session-Intellectual property	Practice-Intellectual Property	Practice- Writing your own patents	Teams to work on mentor feedback	Session- Entrepreneurial finance	Teams work on finance	Teams work on finance	Guest Evaluation 5	Teams to work on mentor feedback	Teams to work on mentor feedback	Networking with entrepreneurs	Networking with entrepreneurs
Week 6	Session- Business models	One-on-one Mentor session	Session- Getting investment ready	One-on-one Mentor session	Pitch practice	Pitch Practice	Session-How to scale	Manthan- Teams to work on ideas	Session- Measuring performance	Manthan- Teams to work on ideas	Demo day	Demo day

Existing Research based start-ups and projects:

IITGN faculty members and Doctoral/ graduate students are pursuing projects and start-ups in deep-tech, deep-science areas focusing on current problems and challenges in technology, such as

health care, robotics, sustainability, and defence, among others.

During the last 6 months, we have supported companies in Climate Change, Robotics and sustainability:

AIRESQ ClimSols Pvt. Ltd., Founded by Prof. Udit Bhatia, specializes in advanced flood resilience and disaster management solutions. Combining AI, physics-guided modelling, and engineering expertise, AIRESQ offers hyperlocal flood models, recovery algorithms, and compound risk assessment tools tailored to India's unique challenges. Unlike traditional static risk mapping, AIRESQ provides real-time, dynamic insights and end-to-end design strategies. Its solutions minimize social vulnerabilities, protect critical infrastructure, and foster long-term resilience, helping stakeholders adapt to climate extremes and urbanization while converting uncertainty into actionable opportunities.

ABSIX Robotics, founded by Prof. Harish PM and IITGN alumni Suyash Patidar, provides an affordable, challenge-driven robotics education platform featuring custom-designed robots, integrated content, and a peer-connected community. Targeting engineering students and institutions, it offers workshops, courses, and licensing models to bridge the gap between theory and hands-on practice in robotics.

ABSIX delivers high-quality, cloud-connected robotics education with a gamified, challenge-based approach.

Shoonya, founded by IITGN alumni Ankit Agrawal and His Co-founder Aishwarya Chaturvedi, is revolutionizing Li-ion battery recycling with an end-to-end solution combining a digital + physical marketplace, SaaS for EPR compliance and proprietary AI-driven battery segregation machines. By enabling efficient sorting, grading, and recycling of 750+ battery types, Shoonya addresses India's growing e-waste crisis, targeting 20% of the nation's Li-ion battery waste by 2040. Its franchise-based collection centers empower waste aggregators, while its marketplace ensures transparent pricing and standardized feedstock for recyclers. With a focus on sustainability, Shoonya aims to boost incomes, reduce environmental harm, and contribute $1 billion to India's GDP by 2040, leveraging cutting-edge tech like computer vision and X-ray diffraction.

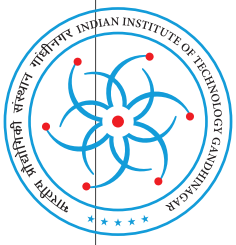
Other companies/ ideas being supported:

S No.	Name of founder/ Key team member	Affiliation	Startup name	Brief description
1	Prof. Atul Bhargav	IITGN Faculty	Cellegant Energy Systems	Developing hydrogen energy and hydrogen fuel cell systems to reduce the total cost of ownership of various distributed energy systems such as UAVs, stationary gensets and eMobility applications.

S No.	Name of founder/ Key team member	Affiliation	Startup name	Brief description
2	Prof. Bhaskar Datta	IITGN Faculty	Plantro	Plantro adopts a holistic approach based on a conceptual and experimental harmony between natural ingredients, sensory appeal and nutritional profile. The current product profile includes 'Plantro Millet Cookies,' 'Plantro Nutrition Bar,' Plantro Beetroot Crackers,' 'Plantro Spinach Snacks, 'Plantro protein burger & kebabs.' Each Plantro product is a labor of extensive research and development.
3	Prof. Harish P M	IITGN Faculty	Tesseract Robotics	Developing compliant actuators and indigenous motor-based actuators- drivers that will be of immediate utility in robotics applications and can be commercialized as they are made available in Indian markets.
4	Prof K Sriram	IITGN Faculty	Koshika Bio	developing small organic fluorescent molecules for targeted organelle imaging to enhance the understanding of cellular function. At Koshika Bio, we have designed a library of these probes to be cost-effective, easy to synthesize, and highly specific for visualizing organelles within living cells. Our goal is to establish this library as a leading platform for organelle imaging, contributing to advancements in cell biology, drug discovery, and disease diagnosis.

S No.	Name of founder/ Key team member	Affiliation	Startup name	Brief description
5	Prof Sivapriya K and Gaurav Rai	IITGN Faculty	PBG Kinomics	design and development of protein expression and purification assay for TTK develop a protein inhibition assay for screening the small molecules particularly for cancer
6	Dr. Chandan Kumar Jha	IITGN PhD student	Galanto Innovations	Developing a virtual reality-based rehabilitation system to engage stroke patients in gamified exercises for prolonged periods. The system monitors real-time movement quality, tracks recovery progress through hand kinematics assessments, and provides a simplified aggregate score.
7	Barat S	IITGN PhD student	Sastra Robotics	Developing the Next Generation Robotic Gripper, which aims to revolutionize how robots manipulate objects.
8	Pankaj Yadav	IITGN PhD student	Qnanosol Technologies	Carbon quantum dots based targeted drug delivery
9	Pratik Prajapati	IITGN PhD student	AeroSentinel Technologies	developing indigenous anti-drone technology to prevent the accidents/tragedies caused by intruder drones at sensitive areas such as airports, public gatherings, borders of countries, the oil and gas industry, and other critical locations.

S No.	Name of founder/ Key team member	Affiliation	Startup name	Brief description
10	Dr NVS Praneeth	IITGN Post Doc	FibSens	Development of miniaturised diagnostic and other sensing solution based on plasmonic nanoparticles conjugated to fibre optic microfluidic lab-on-a-chip architecture and coupled to smartphone for analysis and readout
11	Aravind Murugesan	Medical doctor based at AIIMS Delhi		Making the device suitable for insertion through nasal route adding gastric suction port availability in multiple sizes of different age groups and weight.
12	Dr. Prujal Rajendra Parekh	Medical surgeon based in Ahmedabad	Aspiel Technologies	Aspiel aims to innovate in parenteral drug delivery by developing new devices to address complications associated with existing ones. They are in the prototype development phase, with plans to validate the device within the next year.
13	Prof. Saakshi Dhanekar	IIT Jodhpur Faculty	Sensekriti	Development of simple IoT enable sensor chip for detecting bacteria (E.Coli) in urine sample (Chip/Sensor - using Metal Oxides and Microfabrication)
14	Yash Tambi and Prof. Dhiraj K. Mahajan	IIT Ropar based faculty and student team	Ares Systems	Developing membrane-less water electrolysis technology for Green Hydrogen generation. - Make India a global hub for green hydrogen production and export.



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