



Hello!

We are delighted to present the latest issue of our newsletter (Volume VII-2022-23). This issue contains a host of information on the various events and activities that IIML EIC organized for the benefit of entrepreneurs, venture capitalists, investors, and other startup ecosystem stakeholders.

There is a surge of startups in India and a growing interest in startup investment. India has emerged as the third-largest startup ecosystem in the world after the US and China. The pace of growth has been lightning fast, and IIML EIC is making a significant contribution by enabling and empowering startups. At IIML EIC, we assist startups in developing their ideas, standing on their own feet, achieving sustainability, and flourishing. We empower startups by providing cutting-edge technological infrastructures such as AI and IoT labs. Startups get the right guidance at the right time, thanks to a steady stream of regularly organized webinars, workshops, meetings, and training sessions.

We hope you enjoy reading this issue, which includes information about all of our new, engaging initiatives, activities, and training programs that have increased participation.

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AI Lab and IoT Labs- Accelerate Innovation

A well-equipped Resource Centre at IIML EIC, dedicated to the nation, is a step toward driving innovation by providing the necessary infrastructure and tools so businesses can build, optimize, and scale. All individuals associated with the IIM community across India are eligible to use its resources through remote access. IIM Lucknow EIC had inaugurated a unique lab called ‘Prakriti Artificial Intelligence Lab and IoT Lab’ on 15th August 2021 at the IIM Lucknow Noida campus. The AI and IoT labs were established to empower startups and aspiring entrepreneurs by leveraging AI and ML capabilities to accelerate their business ideas and development. The inauguration marked a significant milestone in the EIC’s journey of nurturing and supporting incubated startups. The setup for virtual access of DGX machine (supercomputer) for internal and external use through the network platform. The prakriti.com was yet another significant milestone that started to turn the tables. The NVIDIA DGX-1 at the lab is a supercomputer used for AI, ML, and DL systems. It is designed for high throughput and high interconnected bandwidth to maximize neural network training performance. There is an AI Development Platform on top of the DGX (supercomputer) to enable new businesses to leverage the power of AI with minimum investment in technological know-how and development.

IIML EIC DGX-1 is a Linux-based (Ubuntu 20.04 LTS) GPU cluster having the following features:

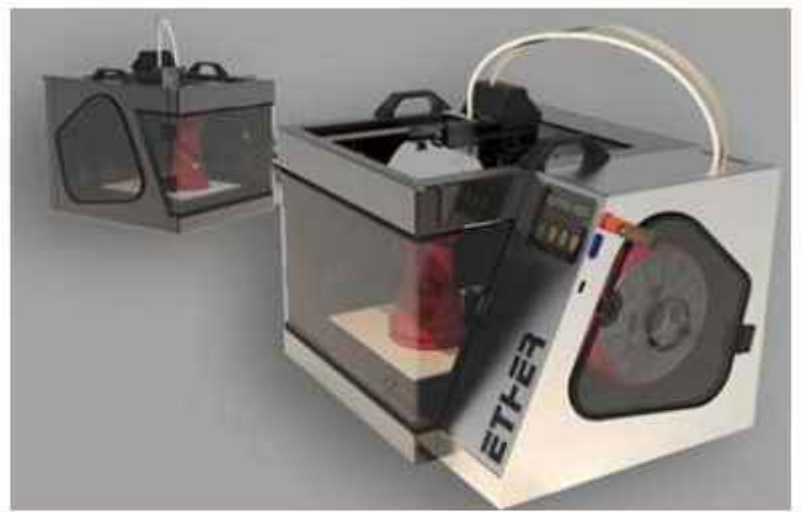
- Login for every incubated startup and its team members, IIML Faculty members, IIML Students, and IIML Researchers
- Common secure space for data and trained AI Models as well as one-click training on popular frameworks

- DGX-1 with 8 V100 GPUs (Ubuntu 20.04 LTS) for GPGPU computation with user login/authentication that is controlled by a NIS mechanism

The labs encourage early-stage startups to innovate, test, and develop their ideas, proof of concepts, and production-ready solutions without worrying about the limitations of technologies, tools, and models.

IoT and 3D Printer – The Next Industrial Revolution

The use of the Internet of Things (IoT), which enables the creation of intelligent devices and represents a network of physical objects or 'things,' is growing exponentially. Embedded with electronics, software, sensors, and connectivity, IoT not only aids in the intellectual exchange of data and helps in the efficient use of IoT devices. It involves connectivity between the devices and technologies used to



translate received data into actions for the user. In many industries such as manufacturing, education, healthcare, transportation, and smart cities, the increasing usage of IoT can be seen. Combining 3D printing or additive manufacturing with IoT has the potential to produce smart devices that will be more efficient and more agile in their operations. 3D printing promises that it can create complex designs with fewer materials and components so that one can derive the real benefit of IoT. Our facility has several IoT-related software and tools such as Altium PCB Design Software, Function Waveform Generation, Raspberry PI, Sun Robotics, etc.

- The use of Ether is quite popular as it satisfies professional prototyping requirements from enclosures to drones and enables a diverse range of supported filaments.
- While the 3D Printer operates, the filament is kept securely in the Build Filament Dehumidifying Chamber to support multiple materials.
- It supports multiple connectivity options such as U-disk, SD-card, and USB port.
- Its other features include Hybrid Linear Rail Mechanism, 3min Preheating Time, 24/7 Running Capability, Power-Off Recovery, Concealed Z-Axis, and Ergonomic Design.
- It supports various types of materials such as PLA, petG, ASA, TPE, PC, ABS, Polypropylene, POM (derlin), Flexible TPU (ninjaflex) | PC-ABS, Silk PLA, Ceramic Finish, Bronze Finish, Wood Finish, Cu Finish, Gold Finish, Metal Finish, and HIPS

With more and more use cases for the combination of IoT and 3D Printing, it is becoming clear that its adoption will become more widespread in the coming years. Startups working towards creating synergies between the two will see more significant growth in Remote Asset Monitoring, Process Automation, Vehicle Fleet Management, Location Tracking, and much more.

MoUs Signed– Enhancing Knowledge and Skills Fostering Collaboration

With HDFC Bank Promoting Entrepreneurship

IIML EIC and HDFC Bank signed an MoU on 14th December, 2021 at the IIML Noida campus. It was yet another strong collaboration to support and facilitate entrepreneurship and innovation. With the signing of this MoU, IIML EIC and HDFC Bank will work together to foster innovation and help the startup ecosystem in the country by supporting startups that build indigenous cutting-edge innovations. The official representatives present from HDFC Bank for the signing of the MoU were Mr. Akhilesh Kumar Roy, National Head – Sales Excellence and Transformation; Mr. Aman Agarwal, HDFC Bank Circle Head Noida; Ms. Pallavi Parab, Deputy Vice President HDFC Startup Team. IIML EIC was represented by Mr. Yamini Bhushan Pandey, Managing Director, and Mr. Arunodaya Bajpai, Head Incubation Operation.



The collaboration between IIML EIC and HDFC Bank aims to facilitate Mentoring, Training, and Product Acceleration for startups. It will also enable startups within the IIML EIC network to avail themselves of various services/facilities of HDFC banks related to startup offerings and schemes.

It is a strategic partnership that benefits all of EIC's Incubated Startups and Portfolio Ventures, and its broad areas of engagement include:

- Incubation support to IIML EIC Incubated Startups
- Seed/Angel fund mobilization and support to IIML EIC Incubated Startups
- Promoting innovation, entrepreneurship, facilitating training, and capacity building.

In conjunction with the 'Skill India' Initiative by the Government of India, the bank endeavours to create a strong entrepreneurship ecosystem conducive to the growth of startup businesses in India. Under this initiative, the Bank, through certified Business Incubators such as IIML EIC, encourages and financially supports and select socially inclined startups at crucial stages of

their development. HDFC Bank has developed:

- A specialized end-to-end banking solution for startups that includes corporate salary accounts (with no requirement of a minimum number of employees per startup)
 - Forex Advisory Services
 - Payment and collections solutions
 - POS terminals at preferred rates and nodal accounts for marketplaces
 - Established by HDFC Bank, SmartUp, an intelligent solution for startups that uses smart financial tools, smart advisory services, and intelligent technology to help startups achieve their goals.
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MoUs Signed– Enhancing Knowledge and Skills Fostering Collaboration

With Peak Venture Partners Giving Impetus to Innovation in the Startup Ecosystem



IIML EIC and Peak Venture Partners signed an MoU on 9th December 2021 to support and facilitate each other in promoting entrepreneurship and innovation. The signing of the MoU that took place virtually will mark the start of a strong collaboration between the two to mentor and nurture early-stage startups. The official representatives from Peak Ventures presented during the MoU signing included Mr. Samir Shah, Managing Partner (Peak Ventures), and Mr. Karan Mehta, Principal (Peak Ventures). IIML EIC was represented by Mr. Yamini Bhushan Pandey, Managing Director and Mr. Arunodaya Bajpai, Head Incubation Operation.

Peak Ventures is an investment management firm that seeks to invest in companies that have the potential to create disproportionate value in the areas of sustainability, specifically new energy, agriculture, water, and climate technologies.

The collaboration with Peak Venture Partners is a strategic initiative designed to benefit all EIC's Incubated Startups and Portfolio Ventures, and its broad areas of engagement encompass:

- Incubation Support to IIML EIC Incubated Startups
- Seed/Angel fund mobilization and support to IIML EIC Incubated Startups
- Promoting innovation, entrepreneurship, facilitating training, and capacity building

IIML EIC is currently engaged in areas of Entrepreneur Development, Business Incubation, and Seed Funding. Peak Ventures is a Partner and Investor with IIML EIC in the areas specific to Technology platforms and Industry 4.0. Peak Ventures and IIML EIC will run joint training programs for startups/investors and other workshops as a part of the collaboration. Peak Ventures will also consider investment or co-investment in IIML EIC-Incubated Startups. IIML EIC will provide those startups with a platform for direct funding opportunities at the Peak Ventures' pitch session.

MoUs Signed– Enhancing Knowledge and Skills Fostering Collaboration

With We Founder Circle Private Limited (WFC) Nurturing Startups and Investing Across India

Among the many collaborations, IIML EIC and We Founder Circle Private Limited signed an MoU on 27th December 2021 at the IIML Noida campus. The official representatives presented from WFC for the signing included Mr. Neeraj Tyagi, Founder & C.E.O. W.F.C, and Mr. Deo Sourav. IIML EIC was represented by Mr. Yamini Bhushan Pandey, Managing Director & Mr. Arunodaya Bajpai, Head Incubation Operation.

WFC are early-stage VC investors looking to make early-stage investments in companies that have the potential to create a disproportionate amount of value, especially for those engaged in technology-focused ventures.



The MoU signing was a strategic undertaking between both the parties to promote entrepreneurialism and intrapreneurship among all IIML EIC Incubated Startups and Portfolio Ventures. Its broad areas of engagement will encompass:

- Joint Training Program on Angel Investing
- Incubation support to IIML EIC Incubated Startups
- Seed/Angel fund mobilization and support to IIML EIC Incubated Startups
- Joint training programs for startups/investors and workshops
- Promoting innovation, entrepreneurship, facilitating training and capacity building mentors, and nurturing the early-stage startup ecosystem
- WFC will consider investment or co-investment in the IIML EIC Incubated Startups. WFC has committed investment up to Rs 2 crores to the IIML EIC Incubated Startups, based on the merit on the startup, with no restriction on ticket size.

WFC is a partner and investor with IIML EIC in the areas specific to technology platforms and Industry 4.0.

Founder's Meet 2020-Supporting Startup Ecosystem

IIML EIC organised a one-of-a-kind Founder's Meet that served as a corporate connect, networking event, and bringing together the startup community. The goal of the meet was to provide a common platform for interaction between EIC's Portfolio Ventures and Investors, facilitating fund mobilisation and mentoring support. Attended by Incubated Startups, Investors, and other Stakeholders, it met that goal well.

On December 10th, IIML EIC hosted a one-day Founder's Meet at its Noida campus to interact with IIML EIC- Incubated Startups. The event drew 15+ startups and benefited from the presence of stakeholders from the startup community and the pool of experts from IIML EIC.

Throughout the day, many animated discussions were held that centered on the current growth trend, startup ecosystem insights for technology startups, and networking for aspiring entrepreneurs.

In his address, Prof Anadi S Pande, Director & Faculty In-charge, IIML EIC, emphasized the distinguishing features of startups, including innovation, knowledge, product uniqueness, and value creation. The meet provided an excellent opportunity for startups to connect, learn, network, and hear from experts, investors, and other successful entrepreneurs.



Startup Achievement- Milestones and Successes



We are proud to announce that IIML EIC-incubated Agritech Startup Farmers Family (Founder - Vikal Kulshrestha) and Deep Tech Startup Constems-AI Systems (Founder - Amit Srivastav) have been selected by StartInUP as a part of the delegation representing the state to present their business ideas at the India Pavilion of Expo 2020 Dubai.

Navachar Building's Renovation and Restoration - Dedicated Office Spaces for Startups



IIML Enterprise Incubation Centre undertook the mammoth task of Renovation and Restoration of an unoccupied building in the IIM Lucknow (Noida Campus). It was converted into an office space with multiple facilities such as a dynamic office space with workstations, high-speed internet, a cafeteria, and a well-maintained garden. The renovated building was renamed as Navachar Building, and the garden space has been named Navachar Udyaan. The building now houses the offices of two of EIC's incubated startups, Constems A.I. and VDT Pipelines, that has a team of over 30 employees each.

Success Story of Simulanis that leverages AR and VR tech to upskill employees

Simulanis is an award-winning national AR-VR-MR and XR technology company incorporated in 2013. Since 2015, they have been the first movers in the space. They have built training and productivity-oriented products for industrial practices, with use-cases including training, operations, repair, maintenance, troubleshooting, remote assistance, and virtual collaboration in the pharmaceutical, FMCG, automotive, automation, oil and gas, engineering, power, and utility sectors.

In a brief description of Simulanis, its training products include generic XR-based content libraries compatible with XR hardware, desktops, and mobiles addressing use-cases as mentioned above, along with 4D XR-based Smart Simulators. Their productivity products include XR-based Remote Assistance and Digital Workflow Platforms, which are compatible with mobile, desktop, and a range of different smart glasses.

In just seven years of its operation, Simulanis has trained more than **10,000 operators across 100 sites** while building a client base of over **140 companies**, most of them being **Fortune 500 companies**. Simulanis has grown at more than **100% year-on-year since 2015, turning profitable last year (FY 2020-21)** and is one of the highly funded companies in their domain, having raised investments from institutional investors based out of the USA and India.

The USP of their product line-up is their proprietary Data Analytics Suite (SANALEXA), which comprehensively measures the effectiveness of learning and training in VR through a granular approach across psychological, behavioral, and cognitive parameters. In addition to complementing their software capabilities with in-house manufacturing of XR hardware, they have built **India's 1st Virtual Reality Haptic Hand-Gloves (REFLEXIS) and India's 1st Virtual Reality Haptic Helmet (H2)**.

To know more about this tech-based Startup, Simulanis, check out the following link: <https://simulanis.com/company>



How can Startups benefit from AI Lab?

Value Derived from Facilities that Drive Faster Innovation

Article by Amit Srivastava, Co-Founder of Constems A.I. (An IIML EIC Portfolio Venture)

We have been doing business as a civilization for as long as we can remember. In different eras, different enablers for doing business have existed. There have been different enablers for doing business at different times. The barter system was made easy with the introduction of money. Creating a marketplace provided a defined meeting place for buyers and sellers. Transportation (road, sea, air) enabled access to a larger marketplace. Trade routes in earlier days made transport less risky and more predictive. We have found ways to do things better at every age and time. Today, tech is enabling a business to do better on multiple fronts, adding value to the products, knowing your customer's needs without violating their privacy, or delivering your products in 10 mins! The list is endless. The key is tech-enabled business.



Artificial Intelligence is one such tech that is making a profound impact on how we do business. All the five senses (vision, hearing, smell, taste, and touch) have counterparts in AI, some at the level where they add value to the products, while some are still at an experimental level. Vision, hearing, and speech are prominently used in current products and solutions. We have 'Alexa' and 'Siri' as intelligent assistants in our home. At the same time, some of the advanced factories are using 'vision' for security, safety, and quality standards in their facilities.

What are the challenges and entry barriers of using Artificial Intelligence for enabling businesses? There are three prominent parts to it. First is understanding where to use it in the given company or domain knowledge. Second, the knowledge to use it, and third, the means to use it. Domain knowledge and AI knowledge are needed to go into creativity mode for generating new products and solutions. Landing it on the ground will require experimentation (creating, modifying, training, and re-training AI models), which is the third part, the means to use it. It is also one of the entry barriers as it requires a capital expenditure on hardware resources, which can help in experimentations. Access to faster and more significant hardware resources will reduce the time to market. It is where the concept of AI Lab is formulated.

The AI Lab's objective is to provide the new business with the means to enable their business with Artificial Intelligence technology. New companies can do experimentation (creating, modifying, training, and re-training AI models) at high speed and allow their products and solutions with AI technology. The AI Lab is equipped with NVIDIA's DGX-1, a supercomputer for AI experiments, and other hardware resources.

Some of the key features of DGX-1 include 170 teraflops of computing power and 96x faster than a CPU-based computer. If a classification activity in an AI takes 711 hours to train, then on DGX-1, it will take just 7.4 hours.

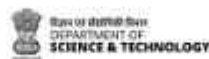
To enable easy and 24-hour access, the whole AI Lab has been designed to be accessed remotely. The user can log in to <https://prakriti-ai.com/> and easily access the DGX-1 and other services at the AI Lab. The AI Lab and the remote access mechanism are beneficial for the people developing AI tech enabled businesses. The whole platform is based on self-service and is easily accessible. We encourage you to use the platform and build something special.



Our Incubated Startups



Our Associates and Partners



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