NEST Newsletter (January 2021)

CSIR

- CSIR-National Chemical Laboratory (CSIR-NCL), **Pune has joined hands with Indian Institute of Technology Bombay (IITB) for the development of Virtual Lab** and to spread benefits of Jigyasa program to a large section of school student's community on completely digital mode. The platform will focus on simulation, pedagogy-based content, science comics, interactive videos, storyboard, games, quizzes, webinars, and many other features that make the learning process enjoyable.

  https://www.punekarnews.in/pune-csir-ncl-signs-mou-with-iit-bombay-for-development-of-virtual-lab/

DoT

- **India and Japan signed MoU to enhance cooperation in the field of Information and Communications Technologies.** Department of Telecommunications, Government of India and Ministry of Communications, Government of Japan will enhance mutual cooperation in the field of 5G technologies, telecom security, submarine optical fiber cable system to islands of India, spectrum management, smart cities, high altitude platform for broadband in unconnected areas, disaster management and public safety etc.

  https://pib.gov.in/PressReleseDetailm.aspx?PRID=1688812

MeitY

- Union Minister Shri Ravi Shankar **Prasad launched: TEJAS - A Visual Intelligence Tool**. The visual intelligence tool, through the collaborative effort of National Informatics Centre (NIC) and National Informatics Centre Services Incorporated (NICSI), is completely developed in-house using open source technologies and bringing together the best features comparable to market leading Business Intelligence tools. The tool would be primarily used by Government Departments at various levels in the center and state. It will provide State-of-the-art and powerful data analysis for officials to design analytical reports and turn data into accurate analysis and smart visualizations.

  https://pib.gov.in/PressReleseDetailm.aspx?PRID=1692955

- The Ministry of Electronics and Information Technology (MeitY) **will establish a Quantum Computing Applications Lab in the country, in collaboration with Amazon Web Services (AWS), to accelerate quantum computing-led research and development** and enable new scientific discoveries. The MeitY Quantum Computing Applications Lab will provide quantum computing as a service to government ministries and departments, researchers, scientists, academia, and developers, to enable advances in areas such as

manufacturing, healthcare, agriculture, and aerospace engineering. AWS will provide hosting with technical and programmatic support for the Lab.

https://pib.gov.in/PressReleasePage.aspx?PRID=1690085

- MeitY **will soon come with Standard Operating Procedures in line with the Production Linked Incentive (PLI) scheme** for manufacturing of mobile phones to capture demand for wearables, hearables as well as Internet of Things devices.

  https://www.timesnownews.com/business-economy/article/major-government-push-for-wearables-hearables-and-internet-of-things-devices-soon/703732

NASSCOM

- The National Association of Software and Services Companies **(Nasscom) has tied up with Telangana Artificial Intelligence Mission (T-AIM) to launch an Innovation Factory to identify and promote innovative artificial intelligence solutions** to address challenges in agricultural sector.

  https://startupmaina.com/nasscom-launches-innovation-factory-to-promote-ai-in-agriculture/

- NASSCOM CoE – IoT and artificial intelligence **has announced the launch of two new platforms FUSION 4.0 and Udyam 4.0 to address issues being faced by MSMEs** in the country. FUSION 4.0 is a Forum Uniting Start-ups and Industries on New technologies that aims to drive innovation in large manufacturing enterprises by leveraging customized solutions from deep-tech

  https://www.dqindia.com/nasscom-coe-roll-new-platform-udyam-4-0-msmes/

- India-US bilateral trade increased over 400 per cent since 2005, with total increase in value from $37 billion in 2005 to $149 billion in 2019, the **Nasscom said, adding the technology sectors of both countries have played a critical role in driving this.** The Indian tech industry makes significant contributions to the US economy and workforce. Nasscom said its member companies have an important history in the US and provides them vital tech services and helps them innovate, compete and grow.

  https://www.business-standard.com/article/companies/tech-played-critical-role-in-booming-india-us-bilateral-trade-nasscom-121012101745_1.html

- With a vision to empower the next generation of learners, the Directorate General of Training (DGT), Ministry of Skill Development and Entrepreneurship (MSDE), **has partnered with Microsoft and NASSCOM Foundation to create learning pathways** for students pursuing IT/ITeS trades at the Industrial Training Institutes (ITI) in India.

https://news.microsoft.com/en-in/directorate-general-of-training-ministry-of-skill-development-and-entrepreneurship-partners-with-microsoft-and-nasscom-foundation-to-empower-students-with-next-generation-digital-skills/

DRDO

- Vice-President M Venkaiah Naidu **inaugurated the Integrated Weapons System Design Centre at DRDO's APJ Abdul Kalam Missile Complex** in Hyderabad. The facility would enhance the capability in design and development of command and control systems for surface-to-air missile (SAM) systems and ballistic missile defense (BMD) systems, said Defense Research and Development Organization (DRDO).

  https://www.thenewsminute.com/article/drdo-opens-integrated-weapons-system-design-centre-hyderabad-142184

- DRDO Young Scientist Laboratory for Quantum Technologies (DYSL-QT) **has developed a Quantum Random Number Generator** (QRNG) which detects random quantum events and converts those into a stream of binary digits. The Laboratory has developed a fiber-optic branch path based QRNG.

  https://www.pib.gov.in/PressReleasePage.aspx?PRID=1684381

- DRDO **conducted the successful maiden launch of Akash-NG** (New Generation) Missile from Integrated Test Range off the coast of Odisha on 25 January 2021. Akash-NG is a new generation Surface to Air Missile meant for use by Indian Air Force with an aim of intercepting high maneuvering low radar cross section aerial threats.

  https://pib.gov.in/PressReleseDetailm.aspx?PRID=1692258

- Defense Institute of Advanced Technology, a deemed university and an autonomous organization funded by the department of defense research and development**, is offering short-term programs on artificial intelligence, machine learning and cybersecurity**.

  https://indianexpress.com/article/education/drdo-offers-online-course-on-artificial-intelligence-machine-learning-cyber-security-onlinecourse-diat-ac-in-7162281/

ISRO

- Indian Space Research Organization (ISRO) **is set to launch a rocket that will solely carry private satellites, including three satellites** developed by Indian space startups and educational institutions.

https://timesofindia.indiatimes.com/india/isro-likely-to-launch-rocket-dedicated-to-private-satellites-on-february-28/articleshow/80415771.cms

- ISRO has **revealed plans to develop reusable rocket-launch technology** this decade, according to a report by SpaceNews.

  https://www.space.com/india-plans-reusable-rockets-for-2020s

- Pixxel, an Indian **satellite-imagery startup aiming to build a constellation of satellites to provide global real-time imagery at unprecedented detail and low cost**, has raised $5 million (Rs 37 crore) in a seed investment round led by venture capital firms Lightspeed India Partners, Blume Ventures and growX. Pixxel was inaugurated by ISRO Chairman Dr. K. Sivan on January 20, 2021.

  https://www.theweek.in/news/biz-tech/2020/08/19/desi-satellite-startup-pixxel-raises-5-million-first-launch-this-year.html

MoES

- Indian National Centre for Ocean Information Services (INCOIS) **successfully conducted sea-trial of 02 Deep Sea long range gliders (first time in India) under Deep Ocean Mission** of Ministry of Earth Sciences (MoES), Government of India, to monitor seas round the year and for accurate assessment of impact of climate change on coastal waters and to develop mitigation policies.

  https://twitter.com/ESSO_INCOIS/status/1355850559652171777

- National Institute of Ocean Technology (NIOT) **signed an agreement for transferring Remotely Operated Vehicle (ROV) technology to L&T Heavy Industries** through National Research Development Corporation (NRDC) at Hyderabad in the presence of Secretary, MoES.

  https://twitter.com/MoesNiot/status/989796333425836032

IIT-B

- Researchers from the Indian Institute of Technology, Bombay (IIT-B) **have recently developed proteomics technologies and made artificial intelligence (AI)-based model** in collaboration with three different hospitals across India. The model differentiates between two malaria parasites — P falciparum and P vivax— for better malaria diagnosis.

  https://indiaai.gov.in/news/iit-bombay-creates-an-ai-model-to-diagnose-malaria

RBI

- Reserve Bank of India (RBI) is **exploring the possibility as to whether there is a need for a digital version of fiat currency** and in case there is, then how to operationalize it.

  https://www.ledgerinsights.com/india-state-digital-rupee-currency-cbdc-trial-blockchain-voting/

- India's parliament **disclosed plans to introduce a bill that will enable a central bank digital currency (CBDC) and ban cryptocurrencies** again. The legislation aims to ensure that blockchain technology is not restricted. The lower house of India's parliament, Lok Sabha, listed twenty planned new bills, one of which was "The Cryptocurrency and Regulation of Official Digital Currency Bill, 2021".

  https://www.ledgerinsights.com/india-to-ban-cryptocurrency-legislate-for-digital-rupee/

GOVT of KARNATAKA

- Property registration in Karnataka is all set to become more secure and hassle-free, with the **state government developing a system based on blockchain technology for online property documentation**. The new system, developed in collaboration with IIT promises an immutable electronic storage of property data through blockchain.

  https://www.deccanherald.com/state/top-karnataka-stories/karnataka-to-use-blockchain-for-property-registration-934862.html

DEVELOPMENTS IN THE PRIVATE SECTOR

TECH-MAHINDRA

- Makers Lab, the research and development arm of Tech Mahindra, and the College of Military Engineering (CME), **Pune have entered a partnership together to address the challenges in the defense sector through a technological intervention** based on artificial intelligence and robotics.

  https://indiaai.gov.in/news/tech-mahindra-and-college-of-military-engineering-team-up-for-ai-based-defence-solutions

JK CONGLOMERATE

- With an aim to strengthen its leadership position in the metal printing market segment, Jaykay Enterprises, JK conglomerate, **has entered into a strategic partnership with the global leaders in 3D Metal design and printing market, EOS**, Germany.

  https://indiaeducationdiary.in/jaykay-enterprises-forms-jv-with-eos-to-bring-3d-metal-design-and-printing-for-india-market/

INTECH

- Intech Additive Solutions is **launching the iFusion LF series for large-format laser powder bed fusion** (LPBF) 3D printer. The new metal 3D printer range was entirely developed and built at Intech's facility in Bengaluru, India.

  https://www.3dprintingmedia.network/intech-large-format-ifusion-metal-3d-printer/

FASAL

- From preventing mildew before its arrival to conserving water, Fasal's devices are helping farmers adopt new ways. **According to Fasal, the deployment of its IoT devices on 10,000 acres of farmland so far has saved 3 billion liters of water.**

  https://www.livemint.com/news/business-of-life/a-watershed-moment-for-india-s-farmers-11609685093933.html

- Cavli Wireless, an emerging player in cellular Internet of Things (IoT) technology, **has partnered with GCT Semiconductor** to license the chipsets and manufacture LPWAN, LTE, and 5G IoT modules in India.

  https://www.outlookindia.com/newsscroll/cavli-wireless-starts-manufacturing-of-lpwan-lte-and-5g-iot-modules-in-india-based-on-gct-semiconductor-chipsets/2019456

ARTICLES/ SHOWS OF INTEREST

Observer Research Foundation (ORF)

Tech @2021: The dark underbelly of the chrome age- (Article by Trisha Ray)

As we enter the new decade, it is critical that nations and communities be able to realize the transformative potential of emerging technologies, in a way that balances short-term growth and long-term consequence.

https://www.orfonline.org/expert-speak/tech-2021-dark-underbelly-chrome-age/

Avoid privileging public sector over private sector in space (Article by Kartik Bommakanti)

Guarding against the temptation of statist developmental efforts in the space sector will be a key test for the government — and for ISRO's scientific bureaucracy.

https://www.orfonline.org/expert-speak/avoid-privileging-public-sector-private-sector-space/

Carnegie India

Biological Risks in India: Perspectives and Analysis Analysis (Article by Shruti Sharma)

India faces a host of biological risk factors. Drawing lessons from the coronavirus pandemic and prior biological disasters, India's government should pursue new safety protocols and develop new institutions to manage future biological risk.

https://carnegieendowment.org/2020/12/09/biological-risks-in-india-perspectives-and-analysis-pub-83399

Downloading a debt trap (Article by Rajesh Bansal)

Given existing enforcement capacity constraints, creating new regulation specifically for digital lending is unwise. But there is a need to clarify what existing guidelines, such as non-coercive recovery and disclosure of terms, mean for digital operations. Is it okay for recovery agents to call parents of student borrowers or should the use of phone contacts in recovery be disallowed altogether? Similarly, if users are sharing personal data in lieu of a loan, apps could disclose the probability of loan approval at the time of application. Finally, there can be hard lines on the data points that are collected in service of loans disbursal. While none of this guarantees meaningful consent or a fair contract, it gives borrowers a chance to make a more informed decision about their financial health.

https://indianexpress.com/article/opinion/digital-lending-loan-apps-rbi-banks-7151613/

Gateway House

Strengthening India's Space Reforms (Article by Chaitanya Giri)

India needs a policy mix that nurtures the Space 2.0 industry, secures it from hostile takeovers and predatory investments from overseas investors, and does not suffocate it under excessive protectionism.

https://www.gatewayhouse.in/strengthening-india-space-reforms/

RSTV

Budget Special Show: Investing in New Tech for Economic Development

Experts—
Sangeeta Gupta, Sr VP and Chief Strategy Officer, NASSCOM
R Jagannathan, Editorial Director Swarajya Magazine
Abhishek Singh, CEO, National e-Governance Division, MEITY
Rohit Satish, Consultant, Frontier Technologies, NITI Aayog

https://www.youtube.com/watch?v=8_bBteKZATo&feature=youtu.be&ab_channel=RajyaSabhaTV

NITI-Aayog

Agricultural Transformation via Entrepreneurship- Amitabh Kant, CEO, NITI Aayog

The technological milieu, policy environment and evolving entrepreneurship present an opportunity for a productive shift in Indian agriculture, a shift that incorporates indigenous farmer knowledge, optimizes the value chain leveraging technological efficiencies and also ensures equitable access to markets for each and every farmer.

https://www.financialexpress.com/opinion/sowing-future-growth-agri-transformation-is-next-growth-frontier-for-entrepreneurship/2171265/lite/?__twitter_impression=true&s=08

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