



Gnanamani

College of Technology

Accredited by NAAC 'A' Grade & NBA

IMPULSE

ELECTRONICS AND COMMUNICATION ENGINEERING



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ACCREDITED BY NAAC 'A' GRADE AND NBA

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GNANAMANI EDUCATIONAL INSTITUTIONS

Gnyanamani Educational Institutions that have carved a niche for itself in the field of engineering education within a very short span of time. Gnanamani College of Technology which was established in the year 2006, the group comprises of Gnanamani College of Education, established in the year 2005.

Gnanodaya CBSE International School was established in the year 2015. These Institutions serve under the aegis of The Christian Educational Development Trust.

Gnyanamani Educational Institutions were established in a well-planned campus with a green environment. The Colleges are spread on a sprawling 60 acres of serene land. The Colleges are easily accessible from all major cities by road and railway networks.

These Institutions have emerged as a pioneer venture in the field of Technical Education. Dr.T.Arangannal – a Rashtria Vidhya Saraswathi Puraskar Awardee is the Chairman and Mrs.P.Malaleena is the Chairperson of the Educational Institutions.

GNANAMANI COLLEGE OF TECHNOLOGY

Gnanamani College of Technology is a leading Institution with state-of-the-art facility.

The institution is rendering noble service to the youths in rural and urban areas. The college is accredited by the NAAC and NBA (CSE, ECE, EEE, and Mechanical). The college has grown in a short span of 17 years with 12 UG Courses namely Agricultural, Artificial Intelligence and Data Science, Bio-Medical, Biotechnology, Chemical, Computer Science, Electrical and Electronics, Electronics and Communication, Food Technology, Mechanical, Information Technology and Pharmaceutical Technology.

The Institute also offers 9 PG courses in Computer Science, Construction Engineering and Management, Environmental Engineering, Embedded System Technology, Power Electronics and Drives, Industrial Engineering, VLSI Design, BME, MBA and MCA.

INSTITUTE VISION

Emerging as a technical institution of high standard and excellence to produce quality Engineers, Researchers, Administrators and Entrepreneurs with ethical and moral values to contribute the sustainable development of the society.

INSTITUTE MISSION

We facilitate our students

- To have in-depth domain knowledge with analytical and practical skills in cutting edge technologies by imparting quality technical education.
To be industry ready and multi-skilled personalities to transfer technology to industries and rural areas by creating interests among students in Research and Development and Entrepreneurship.
- The Department of Electronics and Communication Engineering (ECE) was established in 2006 with the vision of developing the department as a Centre of Excellence in R&D, and in the field of Electronics and Communication Engineering. It also puts strenuous efforts to make the students into technically strong and mentally stable.
- Our mission is to develop innovative and simple instructional material to instil the concepts into the minds of students and infuse scientific temper in the students and exhort them towards research in their specialization. It is also striving arduously with a team of committed teachers to bring out the excellence in both teaching and research. It also entails its road with a view to developing Collaborative Research and strengthening Development linkages with leading organizations in India and overseas.
- The department has Analog and Digital Circuit Lab, Communication Lab, Embedded Systems Lab, DSP/VLSI Lab, Optical and Microwave Lab, Linear Integrated Circuits lab, Electron Devices & Circuits lab, Modelling & Simulation lab, and Microprocessor & Microcontroller lab.
- All the laboratories are set up with air conditioning and supported by uninterrupted power supply facility. The state-of-the-art equipment in the laboratories makes it ideal hub for research and development in the field of Electronics and Communication Engineering.

VISION

- To produce globally competent, innovative, ethical, socially responsible and academically excellent graduates in Electronics and Communication Engineering.

MISSION

- Imparting high quality education with value added programs through state-of-the-art facilities to prepare technically strong engineers with social awareness.
- Addressing the needs of the people's aspirations and to our local needs on the Emerging technology.
- Promoting excellence towards productive careers in industry, research and entrepreneurship.

PROGRAM EDUCATIONAL OBJECTIVES

- Be able to apply mathematics, science and Engineering fundamentals and advanced concepts for their successful careers in industries, higher studies and research.
- Analyse, design and execute interdisciplinary projects by addressing the industrial and social needs.
- Demonstrate and exhibit professional practice with ethical behaviour and engage in continuous learning for career growth.

PROGRAM SPECIFIC OUTCOMES

- Possess knowledge and skills to work on analog and digital systems, AdHoc and sensor networks, embedded and communication systems
- Adapt to emerging technologies with required skills and to offer solutions to the novel problems and succeed in their career.

PROGRAM OUTCOMES

Engineering knowledge:

Apply the knowledge of mathematics, science, engineering fundamentals and an engineering specialization to the solution of complex engineering problems

Problem analysis:

Identify, formulate, review research

literature, and analyze complex engineering problems reaching substantiated conclusions using first principles of mathematics, natural sciences and engineering sciences.

Design/development of solutions:

Design solutions for complex engineering problems and design system components or processes that meet the specified needs with appropriate consideration for the public health and safety, and the cultural, societal and environmental considerations.

Conduct investigations of complex problems:

Environment and sustainability:

Use research-based knowledge and research methods including design of experiments, analysis and interpretation of data and synthesis of the information to provide valid conclusions.

Modern tool usage:

Create, select, and apply appropriate techniques, resources, and modern engineering and IT tools including prediction and modeling to complex engineering activities with an understanding of the limitations.

The engineer and society:

Apply reasoning informed by the contextual knowledge to assess societal, health, safety, legal and cultural issues and the consequent responsibilities relevant to the professional engineering practice.

Understand the impact of the professional engineering solutions in societal and environmental contexts, and demonstrate the knowledge of, and need for sustainable development.

Ethics:

Apply ethical principles and commit to professional ethics and responsibilities and norms of the engineering practice.

A Individual and team work:

Function effectively as an individual and as a member or leader in diverse teams, and in multidisciplinary settings.

Communication:

Communicate effectively on complex engineering activities with the engineering community and with society at large, such as, being able to

comprehend and write effective reports and design documentation, make effective presentations, and give and receive clear instructions.

Project management and finance:

Demonstrate knowledge and understanding of the engineering and management principles and apply these to one's own work, as a member and leader in a team, to manage projects and in multidisciplinary environments.

Life-long learning:

Recognize the need for, and have the preparation and ability to engage in independent and life-long learning in the broadest context of technological change.

MANAGEMENT PROFILE



PROGRAM OUTCOMES

Gnyanamani Educational Institutions are run by two legendary visionaries, Dr. T. Arangannal and Mrs. P. Malaleena, whose dedication to education has shaped the institution's identity and direction.

At the forefront is Dr. T. Arangannal, Chairman, a distinguished leader, who has been a driving force behind the institution's evolution. A recipient of the Rashtriya Vidya Saraswati Puraskar and an honorary Doctorate from the University of Sri Lanka, Dr. Arangannal is widely revered for his lifelong contributions to the field of education. His visionary leadership has cultivated a culture of excellence, discipline, and innovation across all levels of the institution.

Mrs. P. Malaleena, Chairperson, whose unwavering commitment and strategic foresight have been instrumental in establishing the institution's strong ethical and academic foundations. Her focus on student-centered learning and inclusive growth continues to define its mission, vision, and core values.

The leadership team also includes Ms. Madhuvanthinie Arangannal, Vice-Chairperson, who brings a contemporary vision and strategic insight to the institution's development. Her dynamic leadership focuses on aligning the institution with global academic standards and fostering innovation in education.

Operational administration is efficiently managed by Dr. P. Premkumar, Chief Administrative Officer, whose expertise in institutional management and policy implementation ensures the smooth functioning of all academic and support services. His strategic leadership plays a vital role in sustaining and enhancing the institution's quality standards.

Academic affairs are led by Dr. T.K. Kannan, Principal, who is committed to providing a rigorous and engaging academic environment. His leadership promotes research-driven teaching, skills development, and student empowerment, ensuring that learners are prepared to meet the demands of a rapidly changing global landscape.

CHAIRMAN'S MESSAGE

It gives me immense pleasure to express that our Electronics and Communication Engineering release the department magazine for the academic year 2023–24 highlighting the various activities and budding talents of the students on this special occasion. I value the emerging ability and the endowment of the students in their articles, poems, drawing etc., which bloom out their young talents and skills. I appreciate our magazine committee for their venture in bring out this memorable edition.

I wish the Principal, Magazine Committee and the Editorial team, Staff and Students and all the hands that rendered service to bring out a fabulous magazine for this year, I am passionately waiting for the editorial team to reach another mile stone of perfection in the next magazine. I wish them all success.

Dr. T. Arangannal

CHAIRPERSON'S MESSAGE



I am glad to know that our Gnanamani College of Technology is leading a step forward by releasing the magazine 2023–2024. This magazine would be a common platform for the students to express their hidden talents and creativity. My hearty wishes to the Principal, staff members and students for the completion of this IMPULSE.

Wishing you all success in their Academic Endeavours.

Tmt.P.Malaleena

VICE CHAIRPERSON'S MESSAGE

Impulse is particularly important as it encourages the students to share the knowledge they have acquired. Writing articles for the magazine also improves the communication skills of the budding engineers of the ECE department. It is common knowledge that representation of an idea is as important as, if not more important, than the idea itself.

I would like to congratulate the faculty and the students of the editorial team on bringing out the issue of Iconic and my best wishes to the students for a bright future.

Ms. Madhuvanthinie Arangannal

CAO'S MESSAGE

It is my privilege to know that Department of Electronics and Communication Engineering releasing its achievements in a nutshell in the form of a magazine. This magazine is a skylight which always exhibit innovative and the creative thoughts of the blooming engineers. I take this opportunity to congratulate and wish all faculty members and students success.

Dr.P.Premkumar

PRINCIPAL'S MESSAGE



Impulse represents a cloud with a silver lining for the world of technology. It aims to inspire and nurture upcoming-world of technology. The magazine captures the current engineers to bring a revolution in this ever-evolving technological advancements.

I would like to congratulate the vice principal, HoD, Staff members and students for bringing out the issue of Impulse.

Dr. T.K. Kannan

HOD'S MESSAGE

Congratulations to the students and faculty associated to magazine committee for successfully publishing the issue of departmental technical magazine Iconic. Iconic is creating platform which provides an opportunity to the students and staff to express their original thoughts on technical topics.

The magazine plays an instrumental role in providing exposure to the students to develop written communication skills and command over the language. It is a step towards building professional and ethical attitude in them. The entire journey of creating Impulse is an outcome of rigorous effort made by students and faculty.

On concluding note, I would like to thank all the stakeholders for their involvement and encouragement and wish all the best for their bright future.

Dr. R. Prabhu

GENERAL AND TECHNOLOGY UPDATES

India to press Apple, Samsung for faster 5G software upgrades in phones



India's government will push Apple, Samsung and other mobile phone manufacturers to prioritise rolling out software upgrades to support 5G in the country, amid concerns that many of their models are not ready for the recently launched high-speed service.

Prime Minister Narendra Modi launched 5G services on Oct. 1 amid much fanfare, with leading telecom operator Reliance Jio saying it would make the service available in four cities and rival Bharti Airtel in eight. Both companies said the service would be expanded next year.

In August, Jio, India's biggest mobile carrier with more than 420 million customers, snapped up airwaves worth \$11 billion in a \$19 billion 5G spectrum auction. Airtel spent more than \$5 billion, while Vodafone doled out above \$2 billion.

Tata Sons announces merger of Air India and Vistara; Singapore Airlines to own 25.1% in merged entity



Singapore Airlines (SIA) and Tata Sons announced that they have agreed to merge Air India and Vistara, with SIA getting a 25.1 per cent stake in the merged entity at an investment of Rs 2,058.5 crore (\$250 million) in Air India as part of the transaction.

This 25.1 per cent stake will be in an enlarged Air India group – it will have Air India, Vistara, AirAsia India and Air India Express – and the merger of all airlines is targeted for completion by March 2024, subject to regulatory approvals.

“The merger of Vistara and Air India is an important milestone in our journey to make Air India a truly world-class airline. As part of the transformation, Air India is focusing on growing both its network and fleet, revamping its customer proposition, enhancing safety, reliability, and on-time performance. We are excited with the opportunity of creating a strong Air India which would offer both full-service and low-cost services across domestic and international routes. We would like to thank Singapore Airlines for their continued partnership,” Natarajan Chandrasekaran, Chairman, Tata Sons, was quoted in the statement.

Electric robot tractors powered by Nvidia AI chips are here.



Monarch Tractor, an electric smart tractor company, says its first AI-powered farming vehicles, dubbed the MK-V, are rolling off the production line. It's the Livermore, California-based startup's first product, and it uses Nvidia's Jetson edge AI platform to perform agricultural tasks with or without a driver behind the wheel.

"The NVIDIA Jetson enables the MK-V to run low-latency, real-time AI applications while at the same time conserving energy for longer battery life and extended run time," said Monarch Tractor CEO Praveen Penmetsa. Many tractors out in farming fields have semiautonomous modes but largely require a driver to be seated. They also mostly run on diesel gas, so the MK-V, with its fully electric design and driver-optional smarts, is claiming it's the first production model of its kind.

Research on cancer at IIT-Guwahati

Researchers from the Indian Institute of Technology-Guwahati researchers have developed a new strategy to deliver chemotherapeutic drugs specifically to the cancerous cells in a patient's body. The results have been published in the journals of The Royal Society of Chemistry. The research papers have been co-authored by Prof. Debasis Manna, Department of Chemistry, along with research scholars Subhasis Dey, & Anjali Patel.

India's unemployment rate eases to 7.2% in July- September 2022:



India's unemployment rate for people aged 15 years and above in urban areas eased to 7.2 percent in the fiscal second quarter ending September 30 from 9.8 percent a year earlier, indicating a sustained economic recovery following the coronavirus pandemic that had rendered millions jobless.

Data from the National Statistical Office's 16th Periodic Labour Force Survey showed that the unemployment rate among females (aged 15 years and above) in urban areas slowed to 9.4 percent in July-September from 11.6 percent a year ago. In April-June, it was 9.5 percent.

The estimates of unemployed persons in CWS give an average picture of unemployment in a short period of seven days during the survey period.

Apple may shift some iPad production away from China to India



After shifting iPhone production away from China, it now looks as if Apple's got its eye on iPad production. According to CNBC, Apple is discussing producing some of its iPads in India to help diversify its supply chain.

The news comes almost two years after reports emerged that Apple is considering manufacturing iPads in Vietnam, too. Apple is doing this as the company looks to move up to 30 percent of its manufacturing outside of China

Apple's been trying to diversify its manufacturing for years amid trade wars between China and the US and rising labor costs in China. More recently, strict covid restrictions sparked countrywide protests that last month forced Apple to cut down the production of iPhone 14s there, leading to shipping delays. Apple also started manufacturing the iPhone 14 in southern India shortly after its launch. It marked the first time the tech giant had shifted production away from China to India so quickly after releasing a flagship smartphone.

"I think in five years, 35% [of iPhones] will be manufactured in India," Gene Munster at Loup Ventures told CNBC.

Hackers linked to Chinese government stole millions in Covid benefits, Secret Service says

Hackers linked to the Chinese government stole at least \$20 million in U.S. Covid relief benefits, including Small Business Administration loans and unemployment insurance funds in over a dozen states, according to the Secret Service.

The theft of taxpayer funds by the Chengdu-based hacking group known as APT41 is the first instance of pandemic fraud tied to foreign, state-sponsored cybercriminals that the U.S. government has acknowledged publicly, but may just be the tip of the iceberg, according to U.S. law enforcement officials and cybersecurity experts.

They, most speaking on the condition of anonymity because of the sensitivity of the subject matter, say other federal investigations of pandemic fraud also seem to point back to foreign state-affiliated hackers.

Google launches 'Flood Hub', a platform to forecast flood



Google has launched a platform that displays flood forecasts, namely 'FloodHub'. This platform shows the area and time where floods could occur, in order to inform people about the natural calamity and authorities can assist them with effectively.

NASA's InSight lander loses power, enters retirement on Mars



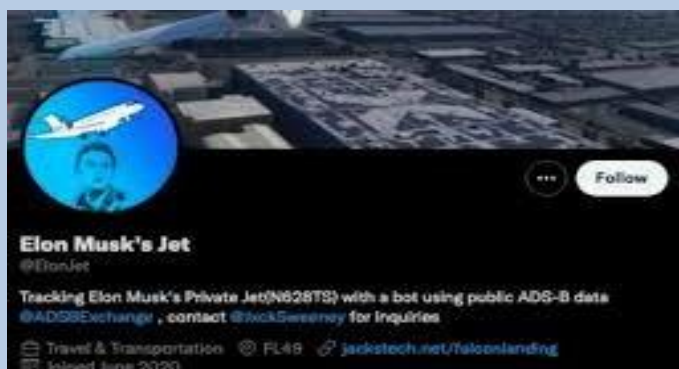
The lander's retirement package involves sitting on the Martian surface coated in the dust that killed it. On Mars, another machine just bit the dust. The marsquake-detecting, photo-snapping InSight lander has now officially completed its mission and will now spend its retirement in the same place it spent its career — sitting on a flat plain on the Martian surface, as dust slowly

accumulates over the course of its mission.

We've known this was coming for a while. InSight's solar panels, which generate electricity for the lander, have been getting covered with dust ever since they unfurled. The mission, officially known as the Interior Exploration using Seismic Investigations, Geodesy and Heat Transport (InSight), was expected to run out of power this summer, but a spate of good weather bought it a few additional months of work on Mars.

Still, the mission was successful enough that NASA decided in April to extend the mission until the end of this year — or until the lander ran out of power, whichever came first.

Twitter suspends @ElonJet plane-tracking bot after Musk pledged to leave it up



Twitter suspended the ElonJet account that tracks the movements of Elon Musk's private jet, despite Musk previously stating he would leave the account up as part of his "commitment to free speech."

"Well it appears @ElonJet is suspended," account creator Jack Sweeney wrote today. He added that people can still follow the private jet bot on other platforms, including Facebook, Instagram, Telegram, and Truth Social.

After saying he wouldn't ban an account that tracks the movement of his private jet, Elon Musk's Twitter has done exactly that, suspending the @ElonJet account alongside its creator and several other accounts that he operates. Obviously Twitter is a private company that's free to moderate its platform however it wants, but the case highlights how even a "free speech absolutist" like Musk can come around pretty quickly on content moderation when his personal safety is involved.

Microsoft says it has offered Sony a 10-year deal on new Call of Duty games



Microsoft has offered Sony a 10-year contract to make future Call of Duty games available on PlayStation if its proposed Activision Blizzard acquisition goes ahead. Microsoft president Brad Smith confirmed the deal in an op-ed in The Wall Street Journal today, noting that "Sony has emerged as the loudest objector" to Microsoft's proposed \$68.7 billion acquisition and that "it's as excited about this deal as Blockbuster was about the rise of Netflix."

Microsoft, maker of the Xbox game console, faces resistance from Sony, which makes the competing PlayStation console and has raised concerns with antitrust watchdogs about losing access to what it calls a "must-have" game title

"We've offered Sony a 10-year contract to make each new 'Call of Duty' release available on PlayStation the same day it comes to Xbox," says Smith. "We're open to providing the same commitment to other platforms and making it legally enforceable by regulators in the US, UK, and European Union."

Reliance gets green approval for World's largest submarine cable



Reliance Industries Limited (RIL) has received approval from the Ministry of Environment, Forest and Climate Change (MoEFCC) to build submarine cable systems for high-capacity and high-speed internet connectivity from Mumbai to Europe and Asia. The cable systems, India-Europe-Xpress (IEX) and India-Asia-Xpress (IAX), are the largest globally and are expected to be ready between 2023 and 2024.

IEX in the Arabian Sea and open seas will connect Mumbai to Europe, with landings in the Middle East and Africa (Oman, Djibouti, Saudi Arabia and Egypt) as well as through the Mediterranean Sea with landings in France, Italy and Greece, further expanding to US Coast (East).

Meanwhile, IAX consists of 12 cable landings in five countries with the main trunk from Tuas (Singapore) to Mumbai and branches to Chennai, Matara (Sri Lanka), Satun (Thailand), and Morib (Malaysia).

The two cable systems will take off from Versova beach and Silver beach in Mumbai, respectively.

INSPIRATIONAL STORY



RATANTATA

Ratan Naval Tata (born 28 December 1937) is an Indian industrialist and former chairman of Tata Sons. He was also the chairman of the Tata Group from 1990 to 2012. Ratan Tata was promoted to management during the 1970s in the Tata group of industries. With a confident mind, He worked with Tata Motors and Tata steel before being appointed as the Tata industry Chairman in 1991.

By his genius mind, Tata Group acquired multiple overseas brands to expand its reach. Tata acquired Tetley in 2000 for 407 million\$ and Commercial Vehicles in 2004 for 102 million\$. In 2007, Ratan Tata acquired Corus, for 12.2 billion dollars. With his leadership, tata become fifth largest steel maker in world.

He served Tata group for nearly 50 years. At 75, he retired from Chairmanship of Tata Group in 2012. During tata period, revenue of tata groups grew up 40 times. He received Padma Bhushan in 2000 and Padma Vibhushan, in 2008.

“I don’t believe in taking right decisions. I take decisions and then make it right.”

~ Ratan Tata

Microsoft will stop selling Windows 10 on January 31, but workarounds remain



Microsoft will stop selling downloadable licenses for Windows 10 on its website on January 31, according to a message on the product pages for Windows 10 Home and Pro. Although Windows 10 will continue to be supported with new security updates until at least October 2025. Even if all Windows 10 sales went away at the end of the month, people who really wanted it should still be able to get it.

For owners of older Windows 7 and Windows 8 PCs who want to upgrade—and you should, since both operating systems received their final regularly scheduled security updates earlier this month. Microsoft is still releasing yearly feature updates for Windows 10, though the 22H2 update contained few, if any, major new features.

Samsung Galaxy S23 might be able to survive a waist-high drop

Surprising no one, Samsung’s next phones will be the first to use Corning’s Gorilla Glass Victus 2. Like I told you in November, Corning says its new cover class should be able to survive a one-meter drop on concrete, one of the more difficult landings for a phone because of all those jagged bumps. (The original Gorilla Glass Victus from 2020 claimed to be able to survive two-meter drops, but only on smoother asphalt; Victus 2 can do that as well).

Audi's latest concept car is a luxury coupe that transforms into a truck: The Activesphere



The latest is the Activesphere, an extremely sleek-looking electric luxury coupe that can transform into a pickup truck with off-roading capabilities. With some truly impressive ground clearance, big 22-inch wheels, and a hatchback that can transform into an open cargo bed at the touch of a button, the Activesphere is described as Audi's most versatile concept.

The Active sphere isn't just a design experiment it also sits atop a modular electric drive platform that Audi is developing in collaboration with sister company Porsche.

The vehicle will include 800-volt architecture to enable fast charging, similar to the Audi E-Tron GT Quattro. That means gaining as much as 300 kilometres with just 10 minutes of charging. The vehicle's ground clearance is adjustable by as much as 40 mm from the basic height of 208 mm. It can also be lowered by the same amount when driving on-road. The first was the Skysphere, a sleek, villainous-looking electric convertible with an adjustable chassis. Next was the Grandsphere, a spacious electric sedan with an interior that looks like it was designed by a Kardashian. And the third was the Urbansphere, a humungous autonomous people-mover for traffic-dense megacities.

MusicLM: Google's new AI tool can turn text, whistling and humming into actual music



Google researchers have made an AI that can generate minutes-long musical pieces from text prompts, and can even transform a whistled or hummed melody into other instruments. at some point, but for now, the only people who will be able to make use of the research are other people building musical AI systems. Google says it's publicly releasing a dataset with around 5,500 music-text pairs, which could help when training and evaluating other musical AI. This mainly developed for a text- to-music AI that creates songs that can last as long as five minutes.

Elon Musk 'doesn't seem like' right person to own Twitter, by BizStoneCo-founder



Elon Musk "doesn't seem like" the right person to own Twitter, the social media platform's co-founder has said. In an interview with the Guardian, Biz Stone said positive changes he had helped oversee in recent years had been unwound by the Tesla chief executive. Elon Musk doesn't seem like the right person to own Twitter, Stone co-founded Twitter in 2006 with Jack Dorsey, Noah Glass and Evan Williams. Musk has recently changed his handle to Mr Tweet. BizStone also added that Elon Musk reversed all the changes I made in Twitter.

A new revolution 5G set to make waves in 2023



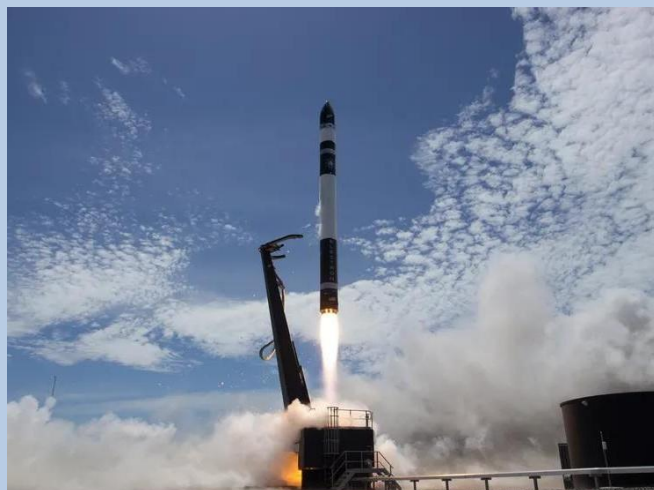
The 5G era is finally here, and the new year will see a lot of use cases in various fields and people utilising the benefits of the technology. Also, India will be one of the first countries where 5G will be used more by consumers than enterprises.

One of the main reasons for end consumers using more of 5G services in India, unlike any other country, is that India still has the cheapest data tariffs and 5G smartphones are also comparatively cheaper than several other countries.

According to Kochhar, 5G network technology is expected to contribute about two percent to India's GDP, amounting to \$180 billion by 2030 and also, 5G subscribers in India are expected to reach around 690 million by the end of 2028, and urban areas are likely to have 5G services available for public consumption by March this year.

5G-specific tariff plans are expected to emerge in India in the next 3-4 months. With the advent of 5G, truly unlimited plans are making a comeback globally, as these are popular with 5G users.

Rocket Lab set to try its first US-based launch again



Rocket Lab will try again to send its first payloads to orbit from the Mid-Atlantic Regional Spaceport (MARS) in Virginia. With clear skies and a launch window that opens after sunset, the launch has the potential to be visible on most of the Eastern Seaboard and as far west as Ohio. While Rocket Lab's Electron launch vehicle has a solid track record of launches from New Zealand, the use of Virginia would represent a big step forward for both the company and MARS itself. Having a US-based launch site allows the company to reach trajectories and opens up opportunities for US government work, some of which require launches from within the country.

Rocket Lab would represent its second major commercial customer. NASA operates small sounding rockets from the site, and Orbital ATK has flown resupply missions to the International Space Station from there. Perhaps more significantly, Rocket Lab is using Wallops for the development of its larger reusable Neutron rocket, which would both launch and land at MARS.

Google employees who survived layoffs are worried, ask top bosses if their jobs are safe



Google axed 12000 jobs a few days ago. CEO Sundar Pichai took full responsibility for layoffs and apologised to all impacted employees. The tech giant, at the time of announcing layoffs, said that it will provide full support to 12000 impacted employees. While 6 per cent of Google's workforce is leaving the firm, the remaining employees are worried. Layoff survivors are concerned about their job security.

Last month, Google's parent company Alphabet announced Sundar Pichai getting a massive hike in salary. The board recognised Pichai's "strong performance" as CEO and said that the vesting of a significant chunk of the award would depend on Alphabet's total shareholder return relative to other S&P 100 companies. As of 2020, according to a filing, Google paid \$2 million as salary to Pichai annually. According to the IIFL Hurun India Rich List 2022, Google CEO's net worth fell 20 per cent to Rs 5,300 crore but he is still amongst the top richest professional managers globally.

Over 21,000 techies working for Indian startups fired, many more to lose jobs soon



As many as 21,000 techies lost their jobs in the last 3-4 months, reports suggest. And this isn't the end of it. Many more people are likely to be impacted by the wave of layoffs in the coming months amidst the deepening funding winter.

As many as 21,000 techies lost their jobs in the last 3-4 months, reports suggest. On January 16, ShareChat, a Google-backed company, announced layoffs and made headlines. Dunzo also announced its decision to fire around 3 per cent of its workforce.

More than 70 startups have slashed job roles in recent months. Even the startups considered to be unicorns, like BYJU'S, OLA, OYO and Unacademy, among others, gave the pink slip to some of their employees.

CEO Mark Zuckerberg puts managers on notice, more Facebook layoffs likely



Right after Elon Musk fired thousands of Twitter employees, Meta CEO Mark Zuckerberg laid off 11,000 employees. It now appears that more employees at Meta are going to lose jobs soon. According to a recent report, Zuckerberg has put some middle managers on notice. That hints at more layoffs coming at the tech company very soon.

Last year, Meta fired 11,000 employees.

Mark Zuckerberg blamed macroeconomic conditions.

Meta may fire more employees soon.



JOB OPPORTUNITIES::

- **Circuit design,**
- **Wireless communications,**
- **Robotics,**
- **Electronics,**
- **Nanotechnology,**
- **Embedded Systems,**
- **Digital Electronics,**
- **Optical Communications**



COMPANIES::

- **Alstom Corporate,**
- **Bharat Heavy Electricals,**
- **Havells,**
- **Crompton Greaves,**
- **Neolex Cables,**
- **HBM Power Systems,**
- **Exide Industries,**
- **Siemens,**
- **BSNL,**
- **Sony Ericsson,**
- **Soliton Technologies,**
- **Reliance,**
- **Nokia and more**



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