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DEPARTMENT OF COMPUTER APPLICATION



INTEGRAL UNIVERSITY
LUCKNOW - INDIA



TECH DOSE

DECEMBER 2024

INTEGRAL UNIVERSITY

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TECHNICAL COMMITTEE

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OpenAI Releases Text-to-Video Model 'Sora'



OpenAI introduced 'Sora', a text-to-video model available for ChatGPT Plus and Pro users, enhancing AI capabilities in content creation. Users will be able to generate videos up to 1080p resolution, up to 20 seconds long and in widescreen, vertical or square aspect ratios. Its access was limited to safety testers in its research preview phase. It is now available to ChatGPT Plus and Pro users as Sora Turbo at no additional cost.

https://economictimes.indiatimes.com/tech/artificial-intelligence/openai-releases-text-to-video-model-sora-for-chatgpt-plus-and-pro-users/articleshow/118154796.cms?utm_source=contentofinterest&utm_medium=text&utm_campaign=rppt

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In 2024, artificial intelligence was all about putting AI tools to work



The first 100 million or so people who experimented with ChatGPT upon its release two years ago actively sought out the chatbot, finding it amazingly helpful at some tasks or laughably mediocre at others. Now such generative AI technology is baked into an increasing number of technology services whether we're looking for it or not - for instance, through the AI-generated answers in Google search results or new AI techniques in photo editing tools.

<https://www.cnn.com/2024/01/23/ai-trends/index.html>

AI revolutionising everything from patient care to health communication 2

AI is transforming healthcare by improving efficiency, reducing delays, and enabling research, as highlighted and therefore, AIIMS, Delhi is investing over Rs 300 crore in digital infrastructure to ensure that every stakeholder is benefitted. Experts emphasized AI's potential to simplify health communication, empower patients, and ensure accessibility. However, they stressed the need for balancing technology with human empathy for compassionate, patient-centred care.

- Delhi AIIMS director



<https://www.bbc.com/health/ai-aiims>

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Tech companies face tough AI copyright questions in 2025

In 2024, courts will hear arguments about whether tech companies like OpenAI and Meta made fair use of copyrighted material to train AI systems. Plaintiffs argue these companies used their work without permission. The outcomes could significantly impact the AI industry. Some companies have started licensing content, but many others continue their legal claims. Tech companies have argued that their AI systems make fair use of copyrighted material by studying it to learn to create new, transformative content.



<https://www.cnn.com/2024/01/23/ai-trends/index.html>

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RBI sets up 8-member panel on ethical use of AI

The Reserve Bank has formed an eight-member committee to develop a framework for ethical AI in the financial sector. Headed by IIT Bombay professor Pushpak Bhattacharyya, the committee will assess AI adoption, review regulatory approaches, identify risks, and recommend a framework for ethical AI use. The committee will submit its report within six months. The central bank had made the announcement regarding the panel in its December monetary policy meeting.



<https://shorturl.at/BUHLE>

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Countdown begins for a year of space-tech commercialization

In 2024, India's space ecosystem saw major advancements, with private startups achieving key milestones. However, challenges like high manufacturing costs and funding shortages persisted. Nonetheless, there are high expectations for the year 2025, with a focus on commercialization, advanced technologies, government support, and startups aiming for growth in satellite applications and services.



<https://shorturl.at/BUHLE>

Govt launches AI tools, ecommerce safety measures to boost consumer protection



सत्यमेव जयते

Food and Consumer Affairs minister Pralhad Joshi introduced new consumer protection measures, including an AI-enabled helpline and tools to detect deceptive practices. Major ecommerce players, like Reliance Retail and Tata Sons, pledged to enhance online shopping safety. Joshi noted significant progress in resolving consumer disputes. The government is also drafting new guidelines to regulate surrogate advertising.

<https://shorturl.at/BUHLE>

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Beijing unveils plans to boost driverless vehicle use in capital



Companies with large robotaxi fleets in China include Apollo Go, a subsidiary of technology giant Baidu, which plans to deploy 1,000 robotaxis in Wuhan by the end of 2024. Pony.ai, which floated in the US market in November, plans to expand its robotaxi fleet nationwide to over 1,000 by 2026 from 250 this year.

<https://shorturl.at/BUHLE>

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India AI mission: Govt opens second round of bids for AI development projects

The Indian government has opened a second round of bids for its India AI mission, focusing on areas like watermarking and labelling, ethical AI, and risk assessment. The mission, launched in July with a budget of over Rs 10,000 crore, aims to boost AI capabilities through increased compute capacity and application development.

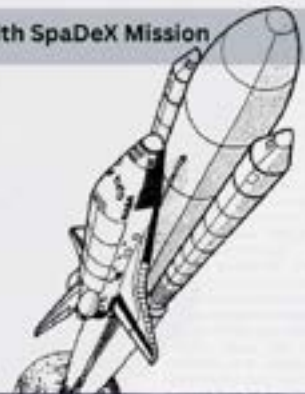


<https://shorturl.at/BUHLE>

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ISRO takes last flight of the year with SpaDeX Mission

ISRO launched the Space Docking Experiment (SpaDeX) aboard the PSLV-C60 rocket. The mission carried two small spacecraft, Chaser and Target, into a 470 km orbit. This mission aims to develop and demonstrate satellite docking and undocking. Successful docking will place India among elite space-faring nations. The fourth stage repurposed as PSLV Orbital Experimental Module will deploy 24 scientific experiments.



<https://shorturl.at/BUHLE>

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Samsung Electronics becomes largest shareholder of South Korea's Rainbow Robotics

Samsung Electronics became the largest shareholder of South Korea's Rainbow Robotics, the robotics company said in a regulatory filing. Samsung, which had previously invested in the robotics company, newly took a 267 billion won (\$181 million) stake, the filing said. With the acquisition, Samsung is also establishing a Future Robotics Office reporting directly to the CEO, the tech giant said in a separate statement.



<https://www.samsung.com>

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Digital infrastructure investment, policy support help services exports touch historic high in October

A significant milestone of \$ 34.31 billion was achieved by India's services exports in October due to sustained investments in digital infrastructure including data centres and high-speed internet. This is a 22.3 % increase compared to October 2023. The covid era was a main propellant in making the sector reach new heights.



<https://www.digitallibrary.gov.in>

Year end 2024: Biggest cyberattacks in India

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In 2024, India faced a surge in cyberattacks, including BSNL's data breaches, Angel One's personal data leak, and WazirX's \$235 million hack. Nearly Rs 12,000 crore was lost to scams, with healthcare, hospitality, and banking being major targets. Telangana, Tamil Nadu, and Bengaluru were top attack hotspots. The growing digitisation of data has led to a rise in cyberattacks, digital fraud, data breaches and operational failures. Cyberattacks globally rose by 76% within the first quarter of 2024, with India being one of the most impacted countries.

<https://www.cyber.gov.in>

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'Silent firing' on a rise with rapid technological advancement

Silent firing is becoming common as 10% of employers opt for layoffs due to technology. Over half of surveyed employees report exclusion and undue pressure from management. While 79% of employers prioritise upskilling, a divide remains on the reliance on AI. The impact of technology raises concerns about job relevance and employee morale.



<https://www.ourworkforce.com>

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Coforge, Cigniti announce merger pact

The two companies have appointed EY and Axis Capital to prepare merger terms which they intend to propose to their respective shareholders within a fortnight, ET had reported on Tuesday. Coforge will absorb the smaller Cigniti Technologies subject to approvals from national company law tribunal. The two companies have appointed EY and Axis Capital to prepare merger terms which they intend to propose to their respective shareholders within a fortnight.

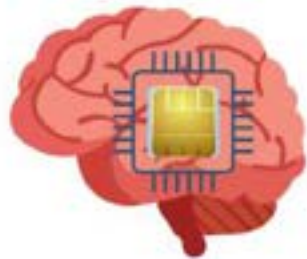


<https://www.coforge.com>

Top Tech News Stories of 2024

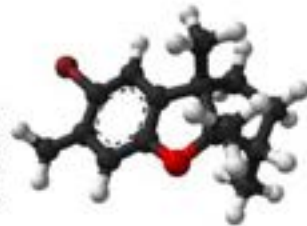
1. AI's Seamless Integration into Everyday Life

Generative AI became essential, with tools like Google's Brain 2.0 enabling real-time translation and Microsoft's AI Personal Agents streamlining tasks. These advancements integrated AI into both work and personal activities.



2. Quantum Computing and AI Chips

Nvidia's Blackwell platform and Google's quantum chips, including "Willow," advanced computational power, enabling breakthroughs in cryptography and AI.



3. Neuralink's Breakthrough Brain Implant

Neuralink successfully implanted a brain chip, allowing a paralyzed individual to control a computer using thoughts. While promising for medical use, ethical concerns persist.



4. Trillion-Dollar Tech Giants

Tech companies reached historic valuations, led by Apple (\$3.86 trillion), Nvidia, and Microsoft, driven by AI and semiconductor innovation.



5. Tech Layoffs and Workforce Restructuring

Over 151,000 tech jobs were cut as companies like Intel and Tesla restructured to focus on AI and automation.

6. Apple Vision Pro: Redefining Mixed Reality



Apple's mixed reality headset, Vision Pro, debuted with AR integration for tasks like surgeries and immersive entertainment, setting a new benchmark in the space.

7. Cybersecurity Challenges and Privacy Concerns

AI-driven misinformation and major data breaches, such as AT&T and Ticketmaster, exposed billions of records, prompting calls for stronger regulations and data protection.



8. Climate Tech Innovations Drive Sustainability

Technologies like ocean-based carbon capture, solar panel recycling, and carbon-absorbing microbes advanced sustainability, backed by corporate and government support.



9. Smarter Consumer Electronics Redefine Daily Life

AI-powered devices like Huawei's trifold phone, Apple's iPhone 16, and Google's Pixel 9 transformed user experiences, raising privacy concerns over extensive data collection.



10. The Rise of Autonomous Vehicles and Air Mobility

Driverless trucks and FAA-approved air taxis made strides, promising to reshape logistics and urban mobility.



Looking Ahead

2024 showcased technological breakthroughs but highlighted challenges in privacy, layoffs, and ethical use. As we enter 2025, the tech industry must balance innovation with accountability to ensure equitable and responsible progress.

Top 10 Strategic Technology Trends for 2024

- 01 AI Augmented Development
- 02 Democratized Generative AI
- 03 Continuous Threat Exposure Management
- 04 AI Trust, Risk, and Security Management
- 05 Platform Engineering
- 06 Machine Customers
- 07 Industry Cloud Platform
- 08 Intelligent Applications
- 09 Augmented Connected Workforce
- 10 Sustainable Technology

