Investiture Issue '25



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EDITOR'S

Dear Readers,

As recent breakthroughs continue to bring science fiction to life, it becomes intriguing to contemplate just how far technology will end up taking us. Consider the recent German cryonics start-up 'Tomorrow Bio' which may one day give us a chance at a second life with cryopreservation. Or, Google's latest quantum chip, 'Willow', that may pave the way to the world's fastest supercomputer by exponentially reducing error rates. On the other hand, it's hard to miss the ethical concerns and inevitable breakdowns that co-exist with technology. Today, Apple is facing one of its biggest lawsuits regarding Siri eavesdropping on users.

With this issue we bring to you an amalgamation of topics surrounding new cutting-edge innovation, ethics, and societal change.

Starting with 'Economic Revolutions' we explore life-changing platforms like Blinkit, IBM's Watson Health, and Amazon Go, and their impact on the global economy. Next, we delve into the world of Genetic Engineering, and witness its evolution from the 'Human Genome Project' to the latest CRISPR technology. With the Centerspread we jump into technology in popculture, and also present to you a heated debate on AI's perpetuation of a culture of instant gratification. The issue concludes with two thought-provoking articles on the possibility of Mars colonization and the rapid rise of cybercrime.

As Bill Gates once said, "The advance of technology is based on making it fit in so that you don't really even notice it, so it's part of everyday life." With this issue, we aim to present to you both sides of the coin, so that you may be adequately informed about the latest technology before embracing it.

Happy reading!

Editors-in-Chief, Riya Mohata and Twisha Choudhary.

Hey Siri, are you recording my conversations? Maybe...

On December 13, 2024, Apple finally agreed to a preliminary settlement of 95 million USD for the Siri Class Action lawsuit. The lawsuit alleges that Apple voice assistant Siri was snooping on users and selling this data to third-party companies. The plaintiffs claimed they started receiving advertisements for products they had discussed in conversation. This issue first came to light in 2019 in the UK when the Guardian claimed that Apple employed contractors to listen to Siri recordings of private conversations. The new lawsuit also alleged that Apple did not inform users they were being recorded without consent.

For more information, please visit: <u>https://www.bbc.com/news/articles/cr4rvr495rgo</u>

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APPLE TO PAY ₹95 MILLION FOR Siri Privacy Violations

Privacy violations can cost millions



Users claim Apple's Siri recorded private conversations & shared data with third parties and the fraction and the test of the test of the second se

MARS COLONIZATION **A BILLON DOLLAR** D REAM OR REALLTY

For centuries, Mars has appealed to humanity's constant need for discovery, newer and greater ideas, and inventions. Today, with rockets launching, plans unfurling, and billionaires competing to leave Earth behind, the idea of colonising the Red Planet no longer belongs to the realm of science fiction. However at this moment, it is still confined to wishful thinking and a ridiculously expensive and audacious attempt to plant a flag on a planet that seems to wish we'd stay home.

I admit that the allure of Mars is undeniable. It is Earth's closest planetary neighbour and boasts certain promising features: polar ice caps, the possibility of underground water, and a day that lasts just 40 minutes longer than ours. Yet, these perks are overshadowed by a list of non-negotiable challenges. Mars's atmosphere is 96% carbon dioxide; its temperatures can plunge to -60°C on average; and, its surface is regularly battered by dust storms that would put Earth's worst weather to shame. Living there, in short, would require feats of engineering, biology, and optimism rarely seen outside Bollywood.

Private companies are already leading the charge towards the colonisation of the Red Planet even in the face of such obstacles. SpaceX, under Elon Musk, envisions bustling cities on Mars, complete with solar-powered domes and the occasional space-suited Tesla. Jeff Bezos's 'Blue Origin' is quietly making moves, perhaps intending to offer "interplanetary shipping" by Amazon Prime! Even Richard Branson's Virgin Galactic may eventually promise luxury Mars trips with panoramic views of the Olympus Moons.

Advocates of colonisation claim that the obstacles are worth the price: breakthroughs in technology and a Plan B for the human race. Critics retort that the solution to Earth's problems — climate change, overpopulation, and resource scarcity — is better spent on time and resources. Why terraform an entire planet, they ask, when we can salvage the one we already have?

Ultimately, this step towards Mars' colonisation is a testament to humanity's ambition rather than its stubbornness in staying put. Whether or not it proves to be a crowning glory or a cautionary tale will be left for history to determine. It seems to me the rich and powerful are tired of controlling countries, so now they want something bigger, brighter and redder. Anyway, who knows, maybe one day our children will look upon the night sky wondering what life on that blue dot could have been like.

Aahana Gupta PreSc-C

FOR:

Throughout the world, there has been a resurgence of slowing down your life: sitting amidst nature; staying off your devices; watching slow movies; listening to 3-minute songs as opposed to 30-second catchy beats. This has been consequential to the ripple effects perpetuated by AI that offers instant gratification – a phenomenon that encapsulates the way of the world today. It is a culture that is dictated by constant thrill, engagement, and satisfaction.

The very crux of this debate lies in the simple fact that AI-induced algorithms condition the brain for quick rewards. AI systems such as generative tools and social media feeds optimize the content in such a way that it is tailored to the user's preferences. They exploit the dopamine feedback loops, making the users crave more such instant rewards. While it may help save time in certain cases, with the way AI is incorporated into our daily schedules, this system rewires out brains for constant reinforcement. Ultimately, this lowers one's ability to sustain focus, making people less receptive to experiences requiring patience.

On a psychological note, AI platforms lower one's gradual emotional quotient. The culture of instant gratification is usually based on superficial attributes. As a consequence, it gradually erodes one's emotional strength and deeper values. This culture also gives rise to mental health issues, especially in adolescents, such as anxiety, depression and hyperfocus.

Additionally, AI works to reinforce narratives that are perpetuated by trends. Social media, for example, has a severe impact on adolescents and young adults, reinforcing social narratives through content tailored to their taste. It leads to shallow human interaction and promotes virtual connections over real life ones. AI thus initiates a cycle of propagation including mass indoctrination and the spread of misinformation.

While the opposition may contest by highlighting the ease that AI endows upon an individual, it is clear that the massive harms leading to the culture of instant gratification perpetuated by AI outweigh any positive attributes.

Gauri Nanda PreSc-A

While AI has undeniably reshaped aspects of modern life, to claim that it perpetuates a culture of instant gratification ignores the transformative, enriching, and nuanced ways it fosters growth, patience, and deeper understanding. AI is not merely a dopamine dispenser; it is a tool that enhances productivity, creativity, and accessibility. Consider platforms like Duolingo, which gamify language learning. Far from promoting superficiality, they use AI to break complex skills into manageable steps, encouraging consistency and perseverance. Similarly, tools like Google Scholar or AI-driven research platforms simplify access to knowledge, empowering students and professionals to delve into meaningful, long-term pursuits.

Furthermore, AI promotes mindfulness, when used appropriately. Apps like Headspace and Calm utilize AI to personalize meditation practices, enabling individuals to disconnect from the fastpaced world and focus on inner well-being. Rather than fostering instant gratification, they encourage self-awareness and reflection, countering the culture of superficial engagement. Blaming AI for societal trends of impatience oversimplifies the issue. Instant gratification is rooted in broader societal, cultural, and technological shifts—not solely in AI. The responsibility lies with users and creators to implement AI responsibly, balancing innovation with mindfulness.

Finally, AI empowers humanity by democratizing opportunities and knowledge. Virtual classrooms, AI-powered healthcare tools, and assistive technologies provide meaningful solutions for challenges that demand dedication and focus. A farmer using AI to optimize crop yields or a doctor leveraging AI diagnostics is not seeking instant rewards but a rather long-term impact.

It is reductive to paint AI as a harbinger of shallow engagement. Properly harnessed, AI offers opportunities for growth and depth, enabling us to address complex challenges and expand human potential. The issue is not AI itself but how we choose to integrate it into our lives.

ChatGPT



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How can I help you today?

Please generate an article on DeepSeek Al model and it's technology.

The rapid progress in AI and technology has made our lives more convenient, excited us about the future, and reshaped how we think and learn. Can you imagine life without ChatGPT? Who would have thought that this generative AI model, released over two years ago, could significantly transform our lives? As technology continues to evolve at a staggering pace, each new model raises the stakes for each one of us. The need for better and more efficient results in less time has never been greater.

DeepSeek AI is a Chinese startup that has rattled the tech world by launching an open-source generative AI model that is said to rival OpenAI's ChatGPT-04. DeepSeek's model was created inexpensively and quickly, unlike the first ChatGPT model. The company claims it only costs \$6 million to build it, just 3% of ChatGPT's first version's cost. Besides, it was developed in a matter of months instead of years.

DeepSeek has recently launched two models: V3 and R1. The V3 model, which emerged in December 2024, was a significant upgrade from the earlier V2 model. It is based on a technology called Mixture of Experts (MoE). Instead of having one big model, MoE uses numerous 'expert' models, each focused on a specific task. It uses a router system that decides which experts should handle the given task, saving a lot of computing power. Used by other Generative AI models like Llama, MoE has one extremely common problem, 'router collapse,' where the system becomes biased toward a few experts. DeepSeek solved this by increasing the number of experts and adding 'shared experts' that are called every time while others are specifically called.

The R1 model of DeepSeek was released in January 2025. It is built on the V3 model but is designed to be better at reasoning. R1 uses a technique called Pure Reinforcement Learning, where the model gets rewarded for making correct decisions, such as training a dog. Unlike other AI models that hide their reasoning, the R1 model explains the logic behind its answers, resulting in better outputs.

With the emergence of advanced AI tools like itself, DeepSeek poses significant challenges for its competitors, such as OpenAI. It paves the way for yet another revolution that accelerates Artificial Intelligence.

International collaboration and ethical guidelines that promote equitable access to technology for all must be advocated to maximise AI's potential for global good. These ethical guidelines are not just a formality but a crucial aspect of AI development that ensures the responsible and beneficial use of this powerful technology, providing reassurance to all stakeholders.

DeepSeek AI has significantly impacted the technology race by delivering powerful AI tools at a fraction of the cost of more prominent competitors like OpenAI. This indicates the growing competition in the AI technology race and gives us hope for a future where AI technology is more accessible.

TECHNOMICS The AI Domíno Effect

Since the arrival of the digital era, the changes in the world are not only profound but unfathomable. Driven by upcoming technologies like Artificial Intelligence (AI), automation, and e-commerce, our industries, societies, and economies are being reshaped at an unprecedented rate.

When we think about AI, we normally associate it with ChatGPT or smart bots, but it affects so much more – not just at a micro level but also at a macro level. The impact which it has on each nation's economy is hugely understated.

AI is revolutionizing industries while enhancing productivity and efficiency. Blinkit has revolutionized the quick commerce sector with its ultra-speed deliveries due to its extensive use of automation. It is powered by its huge network of stores which are managed by AI tracking systems. As a result of this, q-commerce is rapidly overpowering e-commerce. Even Amazon has adopted AI in a way no one ever imagined – a walk-in, walk-out grocery store: Amazon Go. It is a true testament to the influence of AI on daily life experiences which directly results in positive economic growth. Clearly, it is technology we need to thank; otherwise, the school senior dorm would still be without an induction.

E-commerce platforms have used AI to redefine retail patterns to expand market reach. This has empowered entrepreneurs to scale their businesses by transforming consumer engagement. Stores like Shopify have enabled users to create their personal online stores and interact with global customers. This shift in e-commerce encourages innovation and creates opportunities for individuals of all sizes.

Technology allowed us to transition into a world where human beings were replaced by machines which themselves have transformed from simple circuits to virtual networks. IBM's Watson Health has revolutionized patient diagnostics and treatment, leading to greater precision in the field of medicine. This is an example of economic development and not just growth.

Agriculture has been restructured due to John Deere's precision farming technology which integrates GPS, sensors, and automated machinery. This has helped farmers maximize productivity while minimizing waste, ensuring a more optimal utilization of resources and a significant increase in the crop's yield.



According to 'The Global Digital Economy White Paper (2022),' the digital economy's added value in 47 countries reached 38.1 trillion dollars in 2021, accounting for 45.0% of the Gross Domestic Product (GDP). This growth is extremely relevant considering that digital media (social media, online video, and digital advertising) has become an integral part of the digital economy.

Technology is unlocking new possibilities for innovation and growth every second. Embracing this change of digital transformation is essential for individuals, businesses, and economies, alike, to survive in the increasingly competitive and interconnected world.

Deviishee Sodhi PreSc-B

The TechKey

HAVOC AND CYBERCRIME KEEP EVERYTHING DISRUPTED

In a world increasingly driven by digital innovation, a silent threat is on the rise — cybercrime. This modern plague is thriving on the very systems that have been designed to make our lives easier and is weaponizing the latest technologies against mankind. From ransomware attacks that are paralyzing organizations to phishing scams that drain a victim's bank account, the digital world has become a battleground for individuals alike.

The cybercriminals today are armed with tools that exploit vulnerabilities in the progressing technology. These tools have taken their operations to unprecedented levels of sophistication. AI-powered attacks can now enable automatic phishing campaigns and generate malware that can avoid detection systems. The integration of deepfake technologies has led to the fabrication of hyper-realistic audio and videos that are highly convincing to the victim, letting them fall prey to this endless cycle of crime. Matters seem to get worse as cybercriminals turn cyberattacks into a platform for business. The development of specialized software, like Ransomware as a Service (RaaS), allows hackers to launch an attack on any individual or organization by simply paying a certain amount of money, turning hacking into a subscription service for criminals.

Cloud platforms have also become frequent targets as they are trusted with huge amounts of data. Any misconfiguration in these systems makes them vulnerable to attack and provides easy access to sensitive information. Cryptojacking has also emerged as a new threat where hackers secretly use your device to mine cryptocurrency. It is the stealing of computing power for profit, slowing down your device as it works overtime for someone else's gain. The Internet of Things (IoT) has become a double-edged sword. While smart devices make our lives more convenient, they also serve as easy entry points for cybercriminals. A single compromised smart home product or even a baby monitor can grant hackers access to an entire network, exposing sensitive personal data.

Cybercrime now is not just a technological issue but a societal one. The economy is suffering and global losses from cyber-attacks are projected to hit \$10.5 trillion annually by 2025. The fight against cybercrime is a collective responsibility and the time to act is now. Otherwise, the question will soon not be whether we are ready to face these threats, but whether we are prepared to stop them.

> Yashvi Agarwal PreSc-A

tech tips

- 1. Charge devices on public charging stations which could allows attackers to access your data.
- 2. Mistype website addresses. A few typos could redirect you to malicious websites.
- 3. Use third-party VPNs, they might be collecting your data without your permission.
- 4. Access sensitive information (bank accounts, social media, etc) on public wifi it might be tracking you.

Install Norton 360 for phishing protection, dark web monitoring, and secure browsing.
Look for HTTPS in the URL of websites to know which is safe.

3. Make stronger passwords by using LastPass. It also alerts users about phishing scams as well.

4. McAfee WebAdvisor to detect suspicious sites. It also warns you before opening unsafe links.

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