TECH KEY

Techapocalypse

Your Guide to the
Generative Future

EDITOR'S NOTE

"I believe that at the end of the century, the use of words and general educated opinion will have altered so much that one will be able to speak of machines thinking without expecting to be contradicted." - Alan Turing

Dear Reader,

Technology - from the Greek word techne, meaning art and craft, and logos, meaning word and speech - was initially used to describe applied arts. However, it has now evolved to express advancements and changes affecting our daily environment. From keen observance, sensitivity and innovation to modern development; From the shaping of stone tools in the Stone Age to programming newfound Generative Pre-trained Transformer (GPT) Models, Technology has moved alongside Humankind and has etched its significance in our daily lives as an all-engulfing enigma.

This edition of The TechKey aims to display and explore yet another era of pristine Technology - Generative Artificial Intelligence. It's quite hard to predict whether the indomitable craze of Generative and Independent AI will endanger human identity and take us by storm (as it's taking the industry) or be the modern man's most loved tool.

Dissecting the theme, "Your Guide to the Generative Future", The TechKey exclusively brings to you the most awaited debate on the centre-spread - "AI promises the demise of human creativity"- featuring ChatGPT opposing AI and standing with the topic. The TechKey has always been committed to presenting handpicked articles that speak volumes about our past, present and what shapes our future - Racial Bias in Tech Algorithms, the OceanGate controversy, Video Gaming - Nightmare vs. Artistic Dream, Apple Vision Pro Product Review, Upcoming Technologies, India's Techade, Therapeutic Tech, Elon Musk's pause on AI, and the Future of Digital Governance. Lastly, we also made sure that your favourite column, "Boomer's Explain", was given utmost priority after a tiring round of surveys and polls conducted online during summer vacations to filter out the most-asked questions across the campus.

Therefore, by the means of this issue, we hope to not only inform the reader but also open their mind to everything that surrounds them. We wish to spark awareness and individualism in today's age of internet biases and manipulation. We hope for them to step back and appreciate, ideate, and enjoy their own while it lasts true to them.

Technically Signing Off,
Arshiya Sharma
Editor-in-Chief, 2023-24
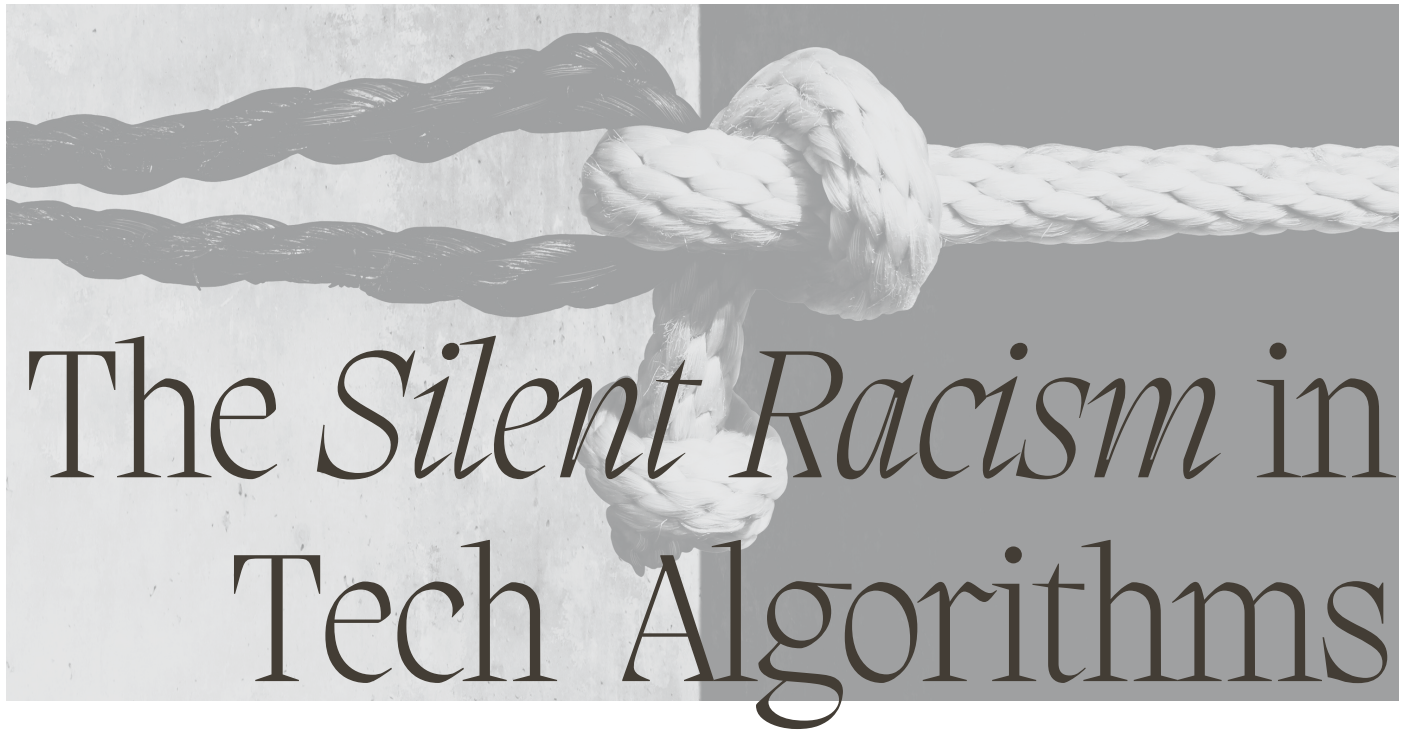
The *Silent Racism* in Tech Algorithms

It has been said time and again - Technology is an entity that holds immense power in shaping our collective survival. But what isn't talked about nearly enough is how that technology is built on an inherent racist foundation and how that translates into discrimination in the physical world.

You may wonder- how can a string of ones and zeroes possibly harbour implicit biases? After all, isn't AI just a reflection of its algorithm and a precompiled dataset?

Algorithms rely strongly on processing existing data patterns relevant to what they seek to predict. That data, however, is a by-product of the humans that have collected and analysed it in the first place. The racial bias that has infamously stained our history and our present, by both creating and perpetuating racism, now risks plaguing our future too. The massive training data that an AI model requires is hard to procure from public domains; thus, programmers often have to depend on unrepresentative or incomplete data sets.

The training system does not register the latest and most relevant data, as that is yet to be collected, compiled, and distributed. As a result, most datasets are old and filled with misinformation that reflects systemic historical inequalities.

For example, take historical data produced by the United States criminal justice system. It is hard to imagine that data produced by an instrument rife with centuries of systemic racism could be used to build an effective and fair tool. If left unchecked, biased algorithms can lead to decisions that will have a disparate impact on certain groups of people even if the programmer's intention is to build a just and unbiased algorithm.

Minority communities have already had to confront the consequences of this glaring oversight. A recent example was observed in Broward County, Florida, where a criminal justice algorithm labelled African American defendants as "high risk" at nearly twice the rate as their white counterparts.

A study by the National Bureau of Economic Research also found that algorithms used by banks to predict loan defaults were more likely to flag Black and Latino borrowers for denial. The authors of the study also discovered that this was likely due to the algorithms being trained on data that was biased against people of colour.

As the old scourge of racism risks blighting the new surge of a digital future, the world is confronted with a sobering question - is the Technology that has long been considered a beacon of progress, anchoring us to the very systems of oppression that have long plagued humankind, and in the process adversely affecting billions?

And most importantly - **How can we do better?**

By Priyal Mittal - SC

THE DRAMATIC
IMPLOSION OF TITAN

While the implosion of OceanGate's Titan submersible was nowhere near as cinematic as the sinking of the Titanic, it was certainly enough for keyboard warriors worldwide to broadcast their outrage and surprise across the internet. However, for experts in technological fields, this event came as no surprise – sadly, their predictions had come true.

On June 18th, 2023, the Titan submarine tragically collapsed and imploded during a mission to observe the Titanic wreckage. Onboard were the CEO of OceanGate, a French deep-sea explorer, a British billionaire, and a father-son pair of Pakistani billionaires. Communication with the carrier ship was lost one hour and 45 minutes into the ill-fated dive.

A thorough search by the US Navy ensued, and after being missing for four days, a Remotely Operated Underwater Vehicle (ROV) discovered the debris of what remained of the submersible and detected the acoustic signature of an implosion.

OceanGate had intended to send the submarine to a depth of 3,800 metres, allowing passengers to gawk at the Titanic wreckage through a small window built into its hull, subjecting every inch of the structure to a force of over 2,000 kg. Additionally, the submersible deviated from the norm by having a cylindrical shape that didn't distribute pressure equally and used a carbon-fibre titanium alloy, a combination untested in such high-pressure conditions.

Typically, crewed submersibles have two separate communication systems: an acoustic beacon for location tracking and another for short text-like messages.

However, due to the absence of the message system and the failure of the beacon system, the submersible lost all communication with the carrier ship.

Adding to the series of ill-advised decisions by OceanGate executives, they opted to use a *$30* Logitech F710 wireless *game controller* with modified sticks to steer the sub, despite charging $250,000 per person for the round trip. OceanGate is currently facing a lawsuit from Logitech over this oversight. If there is any silver lining to this tragic disaster, it is the swift passing of the people aboard. It is estimated that as the air in the submersible filled with dense hydrocarbon vapours, during the collapse, the air would have auto-ignited, incinerating the human bodies in less than one millisecond, sparing the passengers from a drawn-out and agonising death.

This event, however tragic, was not an anomaly and should serve as a wake-up call for the technology industry and regulatory bodies alike.

By Keya Aggarwal- SC

therapeutic
technology

"VR Therapy is talking to a therapist under the guise of an avatar in a computer-generated environment."
-Donna Davis

When you think of virtual reality (VR), you likely imagine someone with a headset playing a video game or watching a movie, but VR therapy has become a ground-breaking strategy in phobia therapy and pain management. VR therapy (VRT) unlocks possibilities for effective treatment by submerging patients in life-like virtual surroundings, creating a safe and regulated environment to face anxieties and relieve pain. It's quite beneficial in today's world and can be used to treat even common fears. For example, let's say you're scared of flying on a plane; VRT can simulate take-off and landing without you having to step foot on a real plane.

The use of VR therapy has numerous benefits over traditional phobia treatments. VR treatment enhances exposure therapy by allowing patients to gradually address their concerns in a regulated setting. VR treatment diverts attention away from pain stimuli by immersing patients in interactive virtual experiences, which reduces pain perception and increases pain tolerance. The treatment typically begins with the patient imagining what they fear then gradually increasing the physical presence of the phobic stimulus. Over time, as the client perceives more control over the environment, they gain a sense of mastery over their fears.

This is only the beginning, but the Tesla suit has taken sensory feedback to a new level. It looks like a wetsuit and is described as a "wearable computer on the surface of the skin". More than that, the suit is electrified. It can cause muscles to move and warm/cool as needed to make a scenario breathtakingly real.

The therapy is flexible and personalised to meet each person's needs and to add to its benefits it reduces the need for medicine and minimises any potential side effects by using an approach that is non-pharmacological and non-invasive. VR therapy already has an amazing success rate of over 75% and the efficacy and realism of VR treatment are predicted to increase as technology develops. It is also being seen as a possibility for the treatment of mental and neurological illnesses in future.
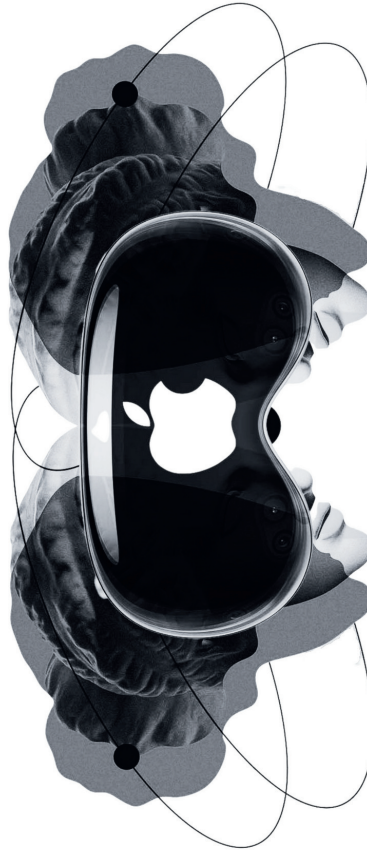
By Priyanjali Sharma - AII

VISION PRO

In the ever-evolving world of technology, Apple Inc. continues to stand at the forefront, setting new standards and pushing the boundaries of innovation. The Apple Visions Pro is a bold leap into the realm of augmented and virtual reality, promising a revolutionary experience that has the potential to redefine how we interact with the digital world. A singular piece of three-dimensionally formed laminated glass flowing into an aluminium alloy frame that gently curves to wrap around your face. The system even offers Zeiss bespoke inserts to correct vision for those who wear glasses.

One of its standout features is exceptional eye tracking, thanks to numerous in-screen sensors and cameras. The micro-OLED panels with a 4K display for each eye provide outstanding clarity, and the spatial headset delivers an immersive audio experience. Whether you're watching movies, scrolling through photos, or creating a productive workspace, the Apple Visions Pro promises a holistic experience with its immersive interface features. It is an impressive way for entertainment to relive your memories or to create a suitable workspace and is Apple's first 3D camera.

Privacy and biometrics are taken to another level with Optical ID, which scans the unique retina of each user to unlock the device. However, what truly sets this device apart from other VR or AR sets, is its powerful R1 processor. Responsible for processing information from all of the headset's sensors, this chip is the key to the device's capabilities and will likely have a significant impact on the evolution of AR technology. Powerful and adaptable, the R1 chip is the "Cinderella's shoe" for AR applications. Despite its numerous high-quality features, there are some downsides to consider. The external battery pack and short battery life are

"Life without AR would soon be unthinkable"
Tim Cook,
Apple CEO

significant drawbacks that might disappoint potential buyers - in essence they are this headset's Achilles heel. Moreover, concerns linger about the potential impact on users' eyes with prolonged usage.

In a world where technology is rapidly advancing, Apple's latest "ground-breaking" device could either become a comprehensive technological marvel or potentially imprison users in a digital world. What's certain for now is that the Vision Pro has captured the world's attention, and its release in 2024 will undoubtedly be a highlight of the year.

By Arushree Kashyap and Naija Mehra
PreSCs

Finland has launched the world's first commercial-scale sand battery, a breakthrough in energy storage technology. The battery uses sand to store heat from renewable sources, which can then be used to generate electricity or heat buildings. The sand battery is a low-cost and environmentally friendly way to store large amounts of energy for long periods of time, and could help Finland to achieve its renewable energy targets and reduce its reliance on fossil fuels.

WHAT'S NEW?

The Nothing Phone 2 is a visually striking and powerful smartphone with a unique LED-back design, offering features like notification displays. Remarkably, it's priced at one-third of the iPhone 15's cost while maintaining similar performance, surprising critics with its affordability and quality.

Xiaomi AR smart glasses are a pair of augmented reality glasses which are designed to overlay digital information onto the real world, providing users with a more immersive and interactive experience. The glasses can be used for a variety of purposes, such as navigation, gaming, entertainment, and productivity although the cost, safety and privacy are still a big concern.

The LG StanbyME Suitcase TV is a unique and innovative product that brings a new level of portability and versatility to the TV viewing experience. Its sleek design, rotating display, and built-in battery make it ideal for casual viewing in various settings, from the kitchen to the bedroom. While its limited battery life and sound quality may not satisfy demanding users, the StanbyME stands out as a compelling option for those seeking a personal and flexible TV companion.

Canva Magic Studio is an AI-powered, all-in-one design platform that empowers users to create, edit, and enhance visual content effortlessly. This software is a competition for adobe express.
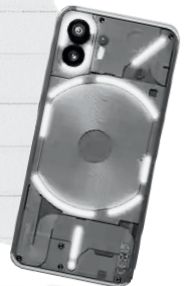
McDonald's introduces an almost fully automated store in Fort Worth, Texas in 2023. Robots in the kitchen ensure quick and precise food preparation, while customers use touchscreen kiosks to place orders. Human employees deliver the prepared meals, impressing customers with the efficiency and convenience of this technological advancement in the food industry.

Meta's latest VR headset, the Quest 3, boasts a 4K+ display, a more powerful processor, and a lighter, more comfortable design with features like eye tracking and passthrough colour. The upgrades promise more immersive and comfortable VR experiences, natural interactions with eye tracking, and increased utility for real-world awareness. The Quest 3 is poised to revolutionise the VR landscape. It has also proved to be competition for Apple Vision Pro.

A.I.'s Impact on The Death

THIS HOUSE BELIEVES THAT THE DEMISE OF

FOR

Artificial intelligence (AI) is the new kid on the creative block, but it's got people wondering, is it the Grim Reaper of human creativity? Let's dive in with a pop culture twist: ever seen the movie "Groundhog Day"? It's like AI's stuck in a loop, churning out variations of the same old hits, making creativity feel like a broken record. But wait, before we get too cosy with our new AI pals, there's a debate stirring under the surface – is AI the Thanos of creativity, poised to snap its creative fingers and turn it into dust?

Now, imagine a world where AI rules the creative roost. AI's not just a gallery-goer; it's an artist itself. You go to an art gallery, and every painting looks like it came out of a clone factory. It's as if R2-D2 painted a masterpiece, and suddenly, human artists are feeling like droids in a creative galaxy. You turn on your playlist, and every song feels like it's been written by an AI DJ with a repetitive playlist disorder. Creativity becomes the victim of its own success, recycled and repackaged until it loses its soul. Imagine a world where every book is a remix of Shakespeare, every painting is a redo of the Mona Lisa, and every song is just "Baby Shark" in disguise.

So, let's sprinkle in some real-world stats like a dash of hot sauce. Spotify, the AI-backed music oracle, confessed that a staggering 80% of our song choices are influenced by AI recommendations. That means you're dancing to AI's tune more than you realise, and it's calling the shots like a puppet master of predictability.

In the art world, AI has even sold its own "masterpieces" for top dollar. There's this piece called "Portrait of Edmond de Belamy" that an AI made, and it scored a whopping $432,500 at Christie's. It's like Skynet making art instead of robots – where does that leave human artists?

But there's another twist in this plot. As generative AI tools become ubiquitous, students are tempted to plagiarise with the click of a button. Why spend sleepless nights crafting essays or art when AI can do it effortlessly? The line between authentic creativity and AI-generated mimicry blurs, and we risk a generation of students addicted to the easy way out, forgetting the essence of creative struggle.

As AI takes over creative tasks, humans might skip honing their creative skills. Why bother with writing when AI can draft novels? This can turn us into passive consumers, relegating our creative muscles to the digital equivalent of a Netflix binge.

In conclusion, while AI's efficiency is a Tesla on autopilot, we must guard against it becoming the conductor of our creative orchestra. We don't want creativity to be like a Groundhog Day sequel, where every idea feels like a rerun. It's time to champion human quirks, unique perspectives, and ensure that creativity doesn't become a remix of itself. After all, we need our cultural tapestry to be woven with the threads of humanity, not just algorithms.

By ChatGPT, OpenAI

Human Creativity Knell

ARTIFICIAL INTELLIGENCE PROMISES HUMAN CREATIVITY

"AI is a tool. The choice about how it gets deployed is ours." - Oren Etzioni

AGAINST

In today's fast-evolving world, artificial intelligence has emerged as the latest innovation that has humanity on edge. However, despite valid concerns about AI's influence on human creativity and ingenuity, I believe that it has the potential to enhance and work alongside human creative capabilities rather than erasing them. Consequently, I would like to present an argument opposing the idea that generative AI will lead to the death of creativity.

Before presenting my argument, I would like to clear up the general confusion as to what exactly is generative AI. In essence, Generative AI is a subset of artificial intelligence focused on producing novel content by utilising extensive datasets or algorithms, generating original outputs such as images, text, and music.

It is an undeniable truth that as generative AI continues to evolve, it will prove itself to be a potent tool- much like a paintbrush or a musical instrument- for creating fresh and engaging content. But despite all its positive attributes, human creativity is irreplaceable since it captures our individuality and is informed by our personal circumstances and experiences. Simply said, artificial intelligence cannot replicate human creativity; it can only imitate it by revitalising existing works.

Another important facet of this debate is that AI is incapable of emulating the spontaneity and intuitions of humans. It remains confined by its training data and is only as imaginative as its learning data and the parameters set by humans. To emulate human creativity, it will have to generate wholly original content, which it is incapable of doing. Additionally, AI lacks emotional intelligence, preventing it from infusing its work with genuine emotion and connecting with a human audience. Hence, it can be reasonably said that AI is not autonomous, and its output is ultimately guided by human choices and imagination.

Furthermore, human creativity is not constrained by finality. Any work of art made by a human is a step on their path to attain self-awareness through experimentation, failure, learning, and, ultimately, development. In contrast, because AI lacks the ability to evolve or fail, it continues to produce monotonous content that falls short of human ingenuity.

Therefore, it is fair to say that Generative AI will not be the doom of human creativity, ingenuity and imagination. Instead, I believe that it can help inspire, enhance and support the human creative process, but ultimately, never replace it. Just as the printing press revolutionised literature without eliminating human authors, generative AI can coexist with human creativity, leading to a richer and more diverse creative landscape.

By Aarisha Jain - PreSc

BOOMERS EXPLAIN

Arshiya'23

Question. What would happen if I was in outer space, and turned on my laptop?

Dear Out-Of-This-World Welhamite,

We truly went to great lengths (though maybe not quite as great as yours) to find the most likely scenario which may occur if you did open your laptop in space.

Well, we doubt that the Welham laptop policy succumbs to your every beck and call such that you're allowed to have a round trip from space, but let's suppose somehow you are.

Firstly, all the mechanical hard drives and storage devices would probably stop functioning due to the lack of pressure that comes with the vacuum, so there goes all your precious data.

Even then, it would burst into flames due to the lack of air. In vacuum heat has nowhere to radiate, and this ingenious idea to bring your laptop to the space (as well as your laptop) will blow up right in your face. The pompous Mac users, who so often boast of their cooling systems, would have to brace themselves as well, for all the fluid lubricating the bearings will be frozen.

We're sure that one laptop less to worry about will bring our matrons immense relief, so we celebrate your galaxy endeavours and wish you all the best (for the greater good of the Welham society).

Question. Is it possible for the school to eavesdrop on my conversations with my parents using the school calling lines?

Dear Conspiracy-Theorist Welhamite,

As much as we would love to take this theory seriously, it seems hardly plausible. The calling lines actually function with the Primary Rate Interface (it carries multiple DS0 voice and data transmissions between a network and a user) as the backbone and the Electronic Private Automatic Brand Exchange (EPABX - which allows communication within branches by using a private network and other external calls) exchanging extensions.

So when you input your House's calling number, you're basically deciding which extension of the Student Calling Server you want to use. Then when you enter your password, you're further down an extension. All of this information is actually stored on the server, with the Student Calling Server acting as a database network.

So dear Welhamite, there is no concept of interception in our school's calling lines (We hope that puts an end to your sleepless nights). The Boomers who collected the data from Mr. Siraj insist that the TechKey Ed-Board should compensate them for braving through his suspicious glares. "His eyes pierced right through us. He has seen all of our soul, all our secrets laid bare as he saw right through us", said the Boomers.

As long as there aren't any keen ears and Russian spies around, be candid on your calls.

GAMING
NIGHTMARE OR ARTISTIC DREAM?

"The art challenges the technology, and the technology inspires the art"
- **John Lasseter**

Video Gaming, also known as most modern-day parents' "nightmare", has metamorphosed from a mere pastime activity into *"The Art Form of the New Age"*.

Video games have a reputation for being the ultimate waste of our resources, 'Cultural Pollution', as someone once said. However, we may criticise it for all we want, the video gaming industry is today one of the highest-grossing segments (equivalent to that of Hollywood!)

Games have evolved from rackets in a court into a full-fledged graphical era integrated to fabricate augmented and virtual realities seamlessly. With cinematic quality, vivid graphics, and realistic sound effects, the experience has stepped up to be an aesthetic influence on the 21st century. Games like CoronaQuest, EndeavorRx, Minecraft Education Edition, etc. are called 'serious games,' as they hold educational and cultural value. The "fun, entertaining games," are based on modern-day lifestyle, idiolect, and trends. The contemporary notion of art - of it being privileged, educational, elitist, - has been redefined by games and exposed the world to a wider spectrum of accessibility and engagement.

New York's Whitney Museum hired web artists in its prestigious biannual show. This action was criticised by many artists as an attempt to kill the human spirit. Scholars believe that technology ceases to portray human sentiment.

Contrary to this delusion, graphical technology provides a platform that provides opportunity, enhances and supports expression. Popular cultures such as jazz, Broadway musicals, Hollywood cinema and comic strips, were in disrepute when launched and accepted over a period of 75 years. Gaming has become the art of the technological world, and we must rise over it to see that a growing number of youngsters want to become game designers rather than filmmakers. But without the support of an open-minded audience and their appreciation, we ignore the many talented game developers' potential and discourage them.

Gaming today is a widely celebrated art because it is embedded in our daily lives, its popularity enhances its cultural value and conveys an impactful sense of mood, provoking original ideas and encouraging imaginative media. If anything, this 'nightmare' before Christmas is not the PlayStation in gift wrap but the prejudice of people who obstruct the path of evolution by deploring gaming.

By Akshita Abhishek Goyal - AI

TechKey's Must Play Section
1. Assassin's Creed Mirage
2. Cyberpunk 2077: Phantom Liberty
3. Cocoon
4. Baldur's Gate 3

Call for
PAUSE
on A.I.

The field of artificial intelligence has witnessed a major boost in these past few years and with the advancement of these easily accessible and dependable technologies we can all agree that our workload has become a lot easier. But as the saying goes - "is the easy way out the safe way out?"

Elon Musk and a group of AI experts and industry executives (Yoshua Bengio, Stuart Russell, Steve Wozniak, and Yuval Noah Harari to name a few) are calling for a six- month pause in developing systems more powerful than OpenAI's recently launched GPT- 4, in an open letter citing implicit pitfalls to society. What does this mean for us as a heavily tech-dependent society? It's a no-brainer that all of us rely on AI in one way or another and this letter is an open warning of all the troubles hidden under its efficiency.

Critics argue that this letter focuses more on the farfetched catastrophes rather than the ongoing problems which arise with the development of similar sophisticated systems – such as racist or sexist biases being programmed into the machines.

"Should we let machines submerge our information channels with propaganda and untruth? Should we develop inhuman minds that might ultimately outnumber, outwit, obsolete, and replace us?" the letter asked, saying that "similar opinions mustn't be delegated to unelected tech leaders." Keeping the accountability of the letter in mind, this step does raise a lot of questions and concerns about the ills of the race of AI. Countless disputations have risen over the impact of Chat-GPT on the education system and it is doubting the credibility of scholars. AI like these tend to promote a decline in individual thinking.

Similar AI systems with "mortal- competitive intelligence" pose profound pitfalls to humanity, the letter claimed. Governments have been requested to set guidelines for the development of AI to protect the community from getting swamped in technology while keeping in mind to not stifle innovation.

EU police force Europol issued a warning about the implicit abuse of the AI system in phishing attempts, disinformation, and cybercrime. Numerous tech titans still have not responded to the open letter such as Sundar Pichai and Satya Nadella, CEOs of Alphabet and Microsoft.

"AI labs and independent experts should use this pause to concertedly develop and apply a set of participated safety protocols for advanced AI design and development that are strictly checked and overseen by independent outside experts," the letter said. This letter may be hypocritical and controversial, but it does serve as a wakeup call for governments and AI inventors around the world, that we need to decelerate.

Step back and assess. Unplug and live.

By Sia Nagpal - PreSC

THE T3CHADE
A FORTUNE OR A *fiasco*?

Do you remember when Blackberry keypad phones used to be the latest piece of technology or when versions of Windows 7 were the trendiest products in the tech market?

Today, artificial intelligence (for some, the bane of our existence and for others, a ground-breaking discovery) has stepped up to infiltrate every device and is part of our daily use. Its essence is felt vibrating through the world, *one G7 meeting at a time*. Naturally, India too is continually transforming into a digitally driven country and economy.

As a step towards digitalization of the economy, Mr Narendra Modi, during his speech on July 1, 2021, pitched his vision to transform the upcoming years of the 2020s into a "tech decade", coining the term "Techade" to encapsulate the idea. The goal of the Techade agenda is to demonstrate to the world India's technology capability and to spur the development of its tech ecosystem. It aspires to use digital innovation to create a grassroot digital revolution and increase access to technology for all societal groups.

Several campaigns have been launched in the name of Techade such as '*Start Up India*', '*Digital India*', and '*Skill India*' which have already begun to make an enormous impact. In the domains of blockchain, drone technology, and artificial intelligence, more than 50 million people have expertise. India currently has the third-highest number of start-ups in the world which is ever-increasing. Digital technology has made it possible for the government to reach remote regions of the nation quickly and easily in recent years.

But is Techade actually the most viable option to boost the country's growth? There is an ignored fear of the tendency of humans to over-rely on technology. Is there any task that humans will be able to perform without depending on an electronic device? This agenda has the potential to create job displacements and inequalities. There are many risks that can arise along the way and by tackling them we can build a more inclusive, sustainable, and responsible approach to technology-driven growth and development.
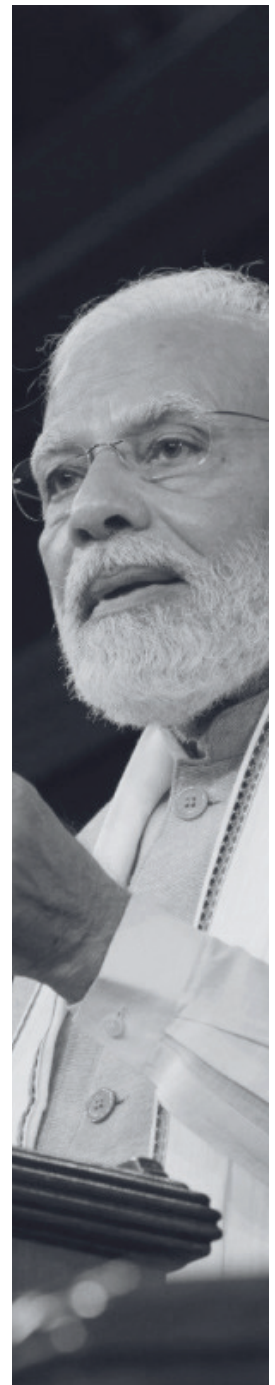
By Pakhi Pragya Sinha - SC

The Future of
DIGITAL GOVERNANCE

In an era of rapid technological advancement, the future of digital governance holds immense potential, but also challenges. While artificial intelligence can vastly improve governance systems and efficiency, it also poses substantial difficulties and hazards to democratic norms.

The relationship between artificial intelligence (AI), democratic institutions, and autocratic regimes is complex and multifaceted. AI can strengthen democratic institutions while empowering autocratic regimes, depending on how it is developed, deployed, and governed.

Digital governments can make more informed choices by analysing large amounts of data and identifying patterns or trends, increasing the effectiveness of democracy; however, they can also enable autocratic regimes to monitor and control their citizens on a large scale by using technologies such as facial recognition and predictive analytics. This has the potential to suppress dissent, limit individual liberties, and degrade private rights.

AI can automate administrative chores and optimise bureaucratic processes, resulting in greater service delivery, decreased corruption, and instil more trust in democratic institutions. These same algorithms, however, can be used to censor information, manipulate public opinion, and control information flow. Autocratic regimes can use artificial intelligence-powered content moderation systems to limit freedom of expression and repress opposition.

Several countries, including the United States, Kenya, China, and Saudi Arabia, have adopted AI and sophisticated technology to improve public services and governance systems. Estonia is frequently recognized as a digital governance pioneer. Every Estonian citizen has digital citizenship, which is a personalised, secure authentication system that allows them to access the many services of Estonia's e-governance system, such as X-Road.

Among others, India's 2005 Digital India Program also exemplifies innovative initiatives and policy interventions on how digital tools can be leveraged to enhance democratic processes by securing and strengthening democratic processes' transparency, accountability, accuracy, and integrity, as well as citizenship inclusiveness and participation.

Striking the right balance between leveraging AI's benefits for democratic governance while safeguarding against its potential misuse is a pressing task for ensuring the future of democracy in the digital age.

By Vishvaney Agarwal - SC

IMMERSIVE TECHNOLOGY

Today, education has escaped the confines of traditional textbooks and emerged as a more accessible means of learning. Modern technology introduces more engaging, creative, and captivating strategies that enhance the classroom experience. Immersive technology is an asset to education, and it has made education more accessible and inclusive.

Transcending the usual, it transports the user to a completely different universe which allows them to be present in both, the real and virtual worlds morphed
. It can be utilised such that it affects and alters the lives of millions, especially as a tool for the education of the differently abled. VR (Virtual Reality) is user-friendly, realistic, accessible and offers enriching, personal experiences that promote a growing interest in education (a necessary factor for its acquisition).

Concentrating can be difficult sometimes, especially with conditions such as ADHD, dyslexia, and others.

Empowering Students with Learning Disabilities

Immersive Technology helps those with disabilities regain hope and build trust in the system. It is a safe and secure form of technology where these students can interact, engage as well as collaborate in a virtual world where they evolve under the same conditions as any other individual. It defies societal standards and unfair setbacks. Holograms merge with reality to open up a whole new world of possibilities. It can do the unimaginable such as allowing blind students to see objects in virtual reality.

In conclusion, these methods of learning not only provide access to extraordinary forms of education but are much more interactive and engaging for the especially abled. Education decreases their dependency on others, helping them to stand up for themselves and giving them enough confidence to do so constantly. Immersive technology serves as a better alternative to provide a more inclusive, healthier, safer, and better future for our society at large.

By Aditi Singh - AIII

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TechKey Techbytes

- October 2023 marks the 20th National Cybersecurity Awareness Month.
- As a response to OpenAI CEO Sam Altman's comment on India's inability to make anything like ChatGPT, Reliance Industries Limited chairman Mukesh Ambani announced that Jio would bring new artificial intelligence systems, similar to OpenAI's ChatGPT, for Indians.
- Intel Core has finally announced its 14th-generation desktop processor.
- Google's new Search Generative Experience (SGE) promotes learning while surfing.
- U.S. Lawmakers seek answers from social media apps such as Meta, X, Google, and TikTok over Israel-Hamas false content.
- According to DigiTimes, Apple is actively preparing and coordinating with its suppliers to introduce its very first foldable iPad, with limited-scale production expected to commence by late 2024.

Down:

1. Which company holds 87% of the global O.S. market share?
2. Which tech giant rents out goats?
3. Which country built a computer that ran on water in 1936?

Across:

1. A movie about a doll which is programmed to be a child's friend.
2. A tech company today whose first product was toilet paper.
3. Name of the artificial intelligence that defeated the world chess champion Garry Kasparov.
4. Energy conservation device in Charlie's Angel (2019).
5. An artificial intelligence created by Tony Stark, which controls his Iron Man armour.

CROSSWORD
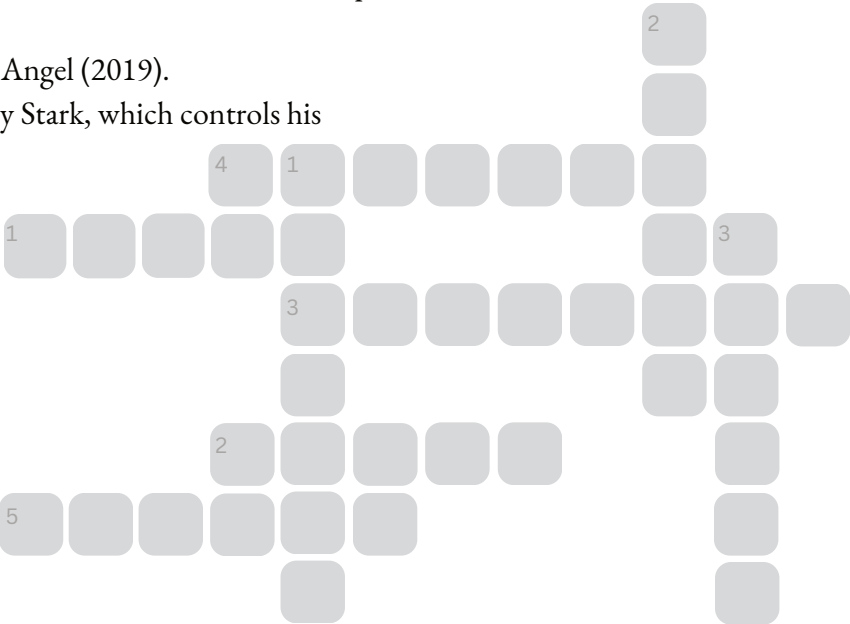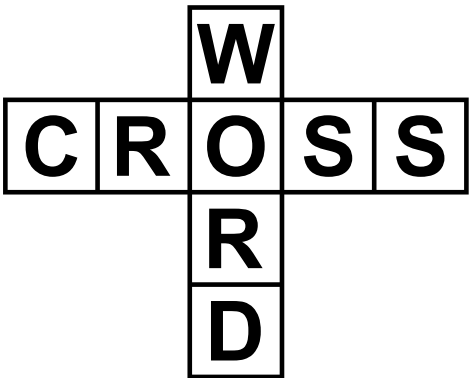
Chocolates await the first 3 people who approach Arshiya with the correct answers.