INSPIRING EXCELLENCE

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SUSTAINABLE DEVELOPMENT GOALS

DEPARTMENT OF COMPUTER APPLICATION
TECHNICAL COMMITTEE

Presents

NOV - 2023

MONTHLY
Tech Dose

INTEGRAL UNIVERSITY
Kursi Road, Lucknow-226026 Uttar Pradesh (India)
www.iul.ac.in

WELCOME TO DIGITAL AND TECHNICAL WORLD

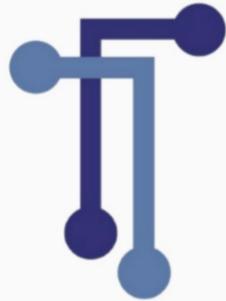|	
Dr. Mohammad Faisal (Mentor)	Gausiya Yasmeen (Member, Technical Committee)
Arshlan Kaushar (B.C.A. 3rd year) (Graphics Designer)	Faraz Rasool (B.C.A. 3rd year) (Editor)
Zarka Hasan (M.C.A. 1st year) (Graphics Designer)	Shikha Rai (M.C.A. 1st year) (Graphics Designer)

01 Tech Titans Testify on Child Safety

A significant Senate hearing slated for January 31st, 2024, will feature prominent tech figures discussing online child exploitation. Meta's Mark Zuckerberg, X's Linda Yaccarino, TikTok's Shou Zi Chew, Snap's Evan Spiegel, and Discord's Jason Citron are set to testify. Notably, Zuckerberg and Chew volunteered for this session. The focus will be on addressing their alleged shortcomings in safeguarding children on digital platforms.

Tech Titans job board

Search openings across our network

02 Capsule: AI-Enhanced News Discovery

In a bid to revolutionize daily news consumption, Parisian startup Capsule introduces an innovative app. Unlike typical news aggregators, Capsule aspires to be the "Spotify for news," employing a fusion of AI and human editorial curation. This distinctive approach transforms diverse sources, including news articles, newsletter snippets, and social media updates, into easily digestible information within their user-friendly app.

03 Google's Problem-Solving Upgrade: Math Made Easy!

Google has boosted its search engine and Lens tool with advanced capabilities to tackle complex subjects like geometry, physics, trigonometry, and calculus. With this update, users can input equations into the search bar or utilize Lens to snap a photo, receiving not only the correct answer but also a step-by-step breakdown. This feature even extends to solving word problems, offering a comprehensive math-solving experience.

04 Saudi Arabia Levels Up: Gaming's New Crown Prince

Saudi Arabia wants to be a big player in gaming, planning to become a major center for gaming and esports. Saudi Arabia is aiming to become a gaming "powerhouse" - a hub for development and esports. With support from Crown Prince Mohammed bin Salman, their wealth fund has invested in top gaming companies like Nintendo, Take-Two, EA, and Activision Blizzard. They aim to become a significant part of the $187 billion gaming industry.

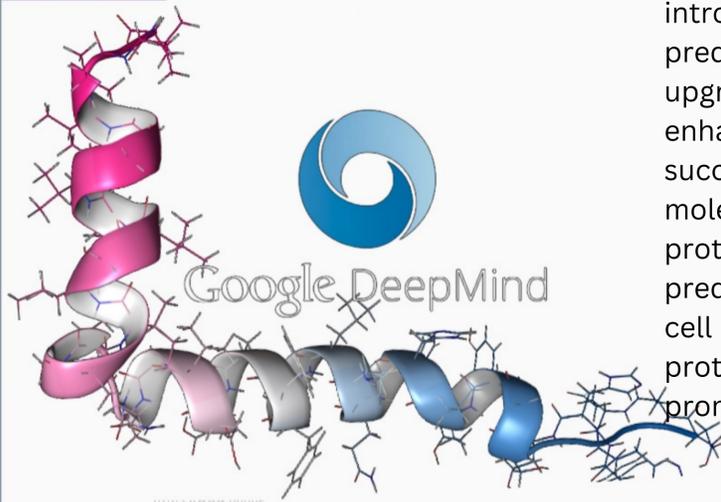## 05 OpenAI's Assistants API: Powering Better Apps!

OpenAI unveiled the Assistants API, a tool empowering developers to create "agent-like experiences" within their apps. This API allows customers to craft an "assistant" equipped with specific instructions, harnessing external knowledge and utilizing OpenAI's generative AI models to execute tasks.

The Assistants API adds extra info to developer-built assistants, like product details or company documents. It also allows function calling, making it more versatile for app development.

06 DeepMind's AlphaFold Advancement in Drug Discovery

DeepMind, renowned for AI research under Google, introduced AlphaFold, an AI that accurately predicts human body protein structures. An upgraded version, AlphaFold 2, has since been enhanced. The latest iteration, AlphaFold's successor, can predict structures for almost all molecules in the Protein Data Bank. Beyond proteins, the new model extends its prowess to predicting ligand structures—molecules altering cell communication by binding to receptor proteins. This development holds significant promise for drug discovery. [Sounds Crazy]

Sony's Fight Against Fake Images: 'In-Camera Authenticity 07

Sony has announced a partnership with the Associated Press and Camera Bits to combat AI-manipulated images through the development of 'in-camera authenticity' technology. This innovation aims to tackle image falsification by introducing a digital signature, essentially creating a birth certificate for images to verify their origin. Sony plans to roll out this feature in 2024 via a firmware update for its Alpha 9 III, Alpha 1, and Alpha 7S III models.

08 GTA VI: Rockstar's Long-Awaited Revelation

After a decade and two console generations since GTA V's release, Rockstar is finally prepared to unveil GTA VI to the world. The gaming giant announced the release of the game's first trailer, scheduled for Tuesday, December 5th, 2023, at 6 AM PT / 9 AM ET. This announcement triggered a domino effect across game studios, with many adopting Rockstar's minimalist image and text style, adorned with soft sherbet colors, as a template for their own announcements.

09 Amazon's Palm Tech Goes Beyond Payments

Originally for cashier-free payments, Amazon's palm scanning tech now shifts focus to office security. Rebranded as Amazon One Enterprise, it's tailored for workplaces. Employees can use this biometric system to access buildings, computers, and sensitive information by scanning their palm. This move extends the tech's reach from grocery stores to corporate offices for enhanced security and access control.

Altman's Emotions and OpenAI's Mission: A CEO's Journey 10

In an interview with The Verge, Altman shared his initial mix of emotions—defiance, hurt, and anger—after his CEO reinstatement. He admitted it took a moment to move past ego and emotions to embrace the change, expressing deep love for the company. Altman emphasized his dedication to OpenAI's mission of making AGI safe and beneficial, citing the company's remarkable progress.

Regarding comments about misunderstandings between him, the board, and Chief Scientist Ilya Sutskever, Altman declined to comment further, stating he wasn't ready to discuss it and expressing unawareness of Sutskever's intentions.

11 India Awaits VoNR: 5G's Missing Voice Technology

Voice over New Radio is not yet available in India. This, even as leading carriers continue rolling out 5G across major cities. There's been no official announcement from Reliance Jio, Airtel, Vi, or any other operator about an impending VoNR launch, suggesting widespread availability is still quite far off. Reports indicate Reliance Jio, India's largest mobile carrier, has been testing VoNR behind the scenes. The goal is to ensure smooth interoperability between existing 4G VoLTE networks and new 5G infrastructure.

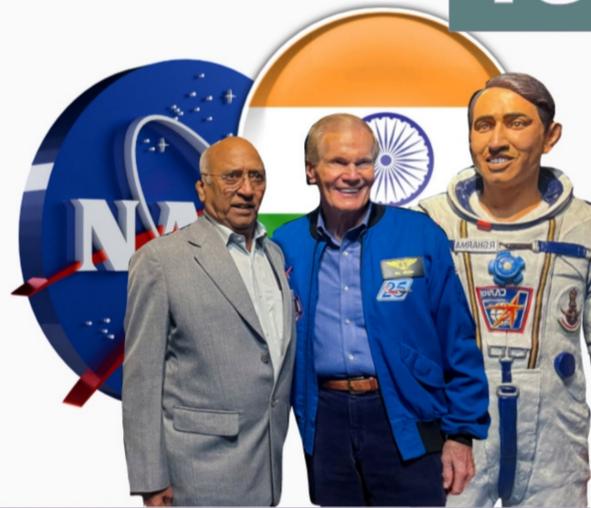## 12 Tech Whisperer's Mission: AI for Every Indian

Jaspreet Bindra
The TechWhisperer

In a recent episode of the 'Tech Whisperer Podcast' on indianexpress.com, tech entrepreneur Jaspreet Bindra revealed an ambitious plan to create India's own extensive language model for generative AI. This model aims to be a digital public asset, accessible to India's vast population of 1.4 billion, mirroring existing public digital infrastructure like payments and identity systems.

NASA to Train Indian Astronaut for ISS Mission 13

NASA's administrator, Bill Nelson, announced during his visit to Delhi that the US space agency plans to train an Indian astronaut for a mission to the International Space Station by the end of 2024. Following a meeting between Nelson and Union Minister Dr. Jitendra Singh, a joint statement from the department of space highlighted discussions on collaborative studies. These include radiation impact, micro meteorite and orbital debris shields, as well as space health and medicine.

14 AMD's Mega Design Center Opens in Bengaluru, India

AMD inaugurated its largest global design center, the Technostar research and development campus in Bengaluru, with Union Minister Ashwini Vaishnaw present for the ceremony. Praising the move, the minister stated, "AMD setting up its largest design centre in Bengaluru is a testament to the confidence global companies have in India." The campus includes modern research labs, visitor demo centers, and collaborative spaces. With 25% of AMD's global workforce in India, this new facility positions the Indian design center as a key contributor to semiconductor advancements.

15 HP Gaming Study 2023: Serious Gamers Earning Big in India

HP India's latest Gaming Study delves into the Indian gaming market, revealing a significant rise in earnings for gamers. Compared to 2022, almost half of the "serious gamer" respondents now claim annual earnings between Rs 6-12 lakh in 2023. Covering insights from 3,000 gamers across 15 major Indian cities, the study highlights a notable shift in attitudes toward gaming. Players are increasingly driven by financial rewards and recognition.

Unknown Facts

The first Apple logo isn't what you would think.

There's a name for when you feel your phone vibrate… but it doesn't.(Phantom Vibration Syndrome)

Everyone uses Google as a spellchecker.

DID YOU KNOW?

The first word to ever be auto-corrected was "teh." to Ten

News of the Month

Amazon announces new cloud AI chip to complete with Microsoft Nvidia and AMD

Amazon has unveiled an artificial intelligence (AI) chip, called Trainium2, to train large language models, at the re:Invent conf erence in Las Vegas. The development comes as other tech companies and chipmakers, including Microsoft, Nvidia and AWS have launched their processors.
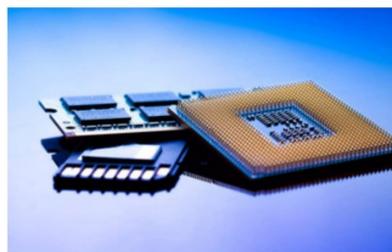
Amazon claimed that the Trainium2 chip is capable of delivering up to 4x faster training than first generation Trainium chips and it offers up to 2x energy efficiency.

Companies will be able to deploy these chips in Amazon Compute Cloud (Amazon EC2) Ultra Clusters (up to 100,000 chips)
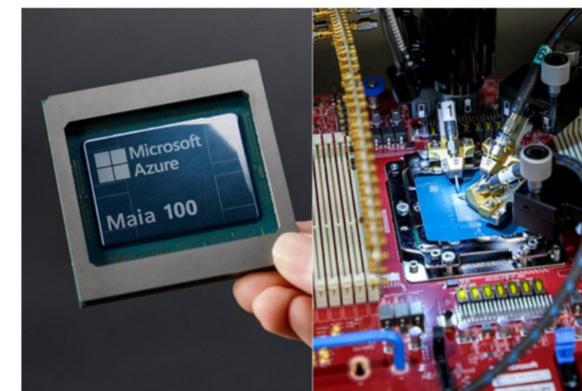
Trn2 instances are intended to enable customers to scale up100,000 Trainium2 chips in next generation EC2 Ultra Clusters, interconnected with AWS Elastic Fabric Adapter (EFA) petabit-scale networking, delivering up to 65 exaflops of compute and giving customers on-demand access to supercomputer-class performance," the company said.

Amazon will start offering the Trainium2 chips next year. The company will continue to offer access to Nvidia's latest H200 AI graphics processing units.

- Shikha Rai M.C.A 1st Year

Amazon launches AWS Graviton4

Amazon also announced Graviton 4 chip which is the company's most powerful and energy-efficient AWS processor to date for a broad range of cloud workloads. According to the company, Graviton4 provides up to 30% better compute performance, 50% more cores and 75% more memory bandwidth than current generation Graviton3 processors.

Microsoft's Maia 100 chip

The development comes a few weeks after Microsoft unveiled the Microsoft Azure Maia 100 AI chip at Ignite 2023. The chip is optimised to handle AI tasks and generative AI. It also announced Microsoft Azure Cobalt CPU, an Arm-based processor to run general purpose compute workloads on the Microsoft Cloud.

The Maia 100 is the first in a series of Maia accelerators for AI, the company said. With 105 billion transistors, it is "one of the largest chips on 5-nanometer process technology,", referring to the size of the smallest features of the chip, five billionths of a meter.

- Shikha Rai M.C.A 1st Year

National Computer Security Day

Every year on November 30th, we commemorate National Computer Security Day to raise awareness of the importance of cybersecurity in our day-to-day activities. It started out as a reaction to the increasing risks in cyberspace, with the goal of raising awareness and motivating people and organizations to use best practices for protecting their digital assets. As we approach National Computer Security Day in 2023, the importance of securing our digital landscape becomes increasingly evident. In an era defined by technological advancements, connectivity, and digital dependency, the need to prioritize computer security has never been more critical.

National Computer Security Day 2023 provide a chance for educational programs and awareness campaigns, in addition to underscoring the significance of cybersecurity. The goal of outreach initiatives, webinars, and workshops is to provide people and organizations with the information they need to safely traverse the digital world.

In conclusion, National Computer Security Day 2023 encourages us to consider the significance of cybersecurity in our daily lives and to take preventative action to safeguard our digital assets and self. Let's work together to make sure that creativity, connectivity, and security—above all— are hallmarks of our digital future.

- Zarka Hasan M.C.A 1st Year

Key Themes for National Cyber Security Day 2023

Empowering user education with knowledge is fundamental to cyber resilience. Initiatives aimed at educating individuals about safe online practices, recognizing phishing attempts, and securing personal information are at the forefront.

For businesses, the emphasis is on building robust cybersecurity policies and practices. Ensuring the security of customer data, implementing secure communication channels and fostering a cyber-aware workforce are vital components of business continuity.

Cyber threats often transcend sectors and borders. National Cyber Security Day encourages collaboration between government agencies and the private sector to share threat intelligence, best practices, and jointly address cyber challenges.

With the rapid adoption of emerging technologies like artificial intelligence and the Internet of Things, integrating security measures into these innovations is imperative. The day promotes responsible and secure development and deployment of ↓ cutting-edge technologies

- Zarka Hasan M.C.A 1st Year