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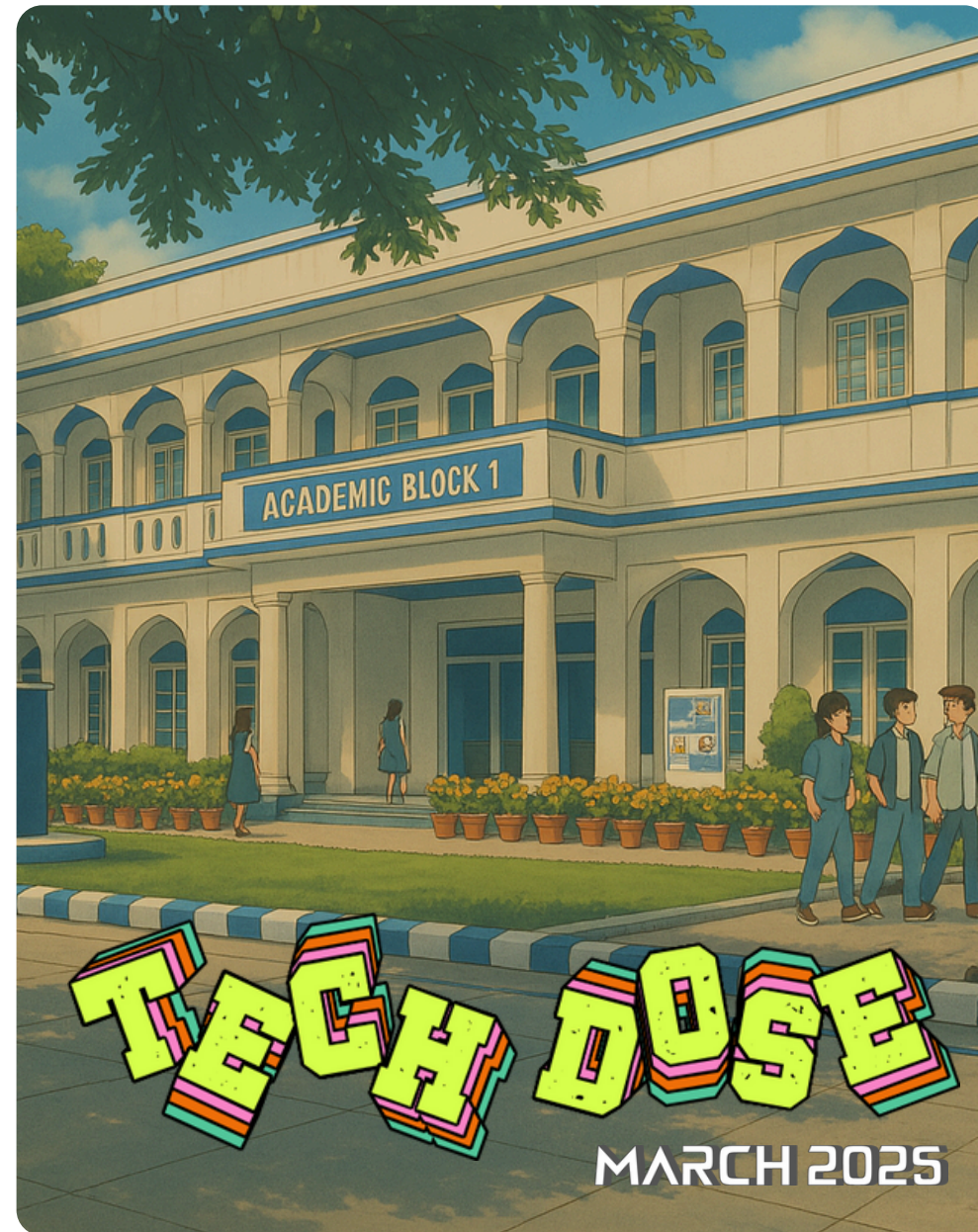DEPARTMENT OF COMPUTER APPLICATION

TECH DOSE

MARCH 2025

TECHNICAL COMMITTEE

1 — Apple and Amazon Struggle to Deliver on AI Assistant Promises

Apple and Amazon's AI Assistants Face Delays-Despite significant hype from Apple and Amazon about groundbreaking generative AI upgrades for Siri and Alexa, promised features have yet to materialize. Amazon unveiled Alexa+ in February 2025, showcasing advanced capabilities like managing Uber orders and scanning emails. Although planned for a March

rollout, only a limited number of users received early access by March 31, and many key features remain missing. Similarly, Apple announced Siri AI improvements as part of iOS 18 in 2024, promoting features that could analyze calendars and assist more personally. However, these enhancements have been delayed, with no firm release date. Both firms face increasing pressure from investors and analysts as AI hype drives market expectations, yet delivering robust, reliable AI assistants to millions remains technically challenging.

https://www.wsj.com/

2 — Tesla's Q1 Deliveries Drop Amid Rising U.S.-China Trade Tensions

Tesla's Deliveries Decline Amid Trade Tensions -In early April 2025, significant developments in the global tech and automotive sectors emerged amid intensifying geopolitical trade tensions instigated by U.S. President Donald Trump. His administration introduced sweeping reciprocal tariffs on imports—including a 25% levy on auto imports—that are expected to impact global manufacturers and intensify challenges for U.S. companies like Tesla. Consequently, Tesla, already grappling with falling demand and political backlash linked to CEO Elon Musk's affiliations with Trump's task force, saw its Q1 vehicle deliveries decline by 13% year-on-year. In contrast, China's BYD surged ahead, delivering over 416,000 electric vehicles in the same period —a 38.7% increase—solidifying its lead in the EV market.

thesun.ie

3 — AI, Politics, and Autonomy Dominate Axios' What's Next Summit 2025

Key Takeaways from Axios' What's Next Summit 2025-Axios hosted its fourth annual "What's Next Summit" in Washington, D.C., on March 25, 2025, highlighting influential figures shaping future work, lifestyle, and play expectations. Key points from the event included discussions on AI advancements, political strategies for upcoming elections, and the future of autonomous vehicles. Notable insights came from Senator Amy Klobuchar, who criticized the Trump administration for not handling the Signal leak, and Lyft CEO David Risher, who predicted that autonomous vehicle technology would be standard in cars within the next decade

ft.com

4 — Samsung Loses Patent Dispute Against Oura in Wearable Tech Battle

Samsung Loses Patent Lawsuit Against Oura -Samsung's lawsuit against Oura was dismissed by a federal judge, as Oura's patent enforcement statements were not directed at Samsung. This legal battle highlighted the complexities of patent rights in the wearable technology sector. A federal judge dismissed Samsung's lawsuit against Oura, ruling that Oura's patent enforcement statements were not directed at Samsung. This marks a significant legal victory for Oura in the wearable tech industry.

Axios (axios.com)

5   What is Ghibli, and why did ChatGPT's Ghibli Studio suddenly become so popular?

A new social media trend is going viral as users post Ghibli-style portraits, inspired by the iconic animation of Studio Ghibli. With the help of ChatGPT's new feature, creating these anime-style avatars has become quick and easy, making the trend a hit among celebrities and everyday users alike.

Android Times of India(androidcentral.com)

Google Pixel 9a Launch Date Announced   6

Google revealed that the Pixel 9a will be available on April 10, following a brief delay to resolve component quality issues. This announcement has generated anticipation among consumers looking forward to the latest in Google's smartphone lineup.

Bert Templeton's Tech Blog (berttempleton.net)

7   TSMC's $100 Billion U.S. Chip Manufacturing Investment

Taiwan Semiconductor Manufacturing Company (TSMC) unveiled a monumental $100 billion investment in U.S. chip manufacturing, cementing its role as a leader in the global semiconductor industry. This move targets production of 2-nanometer chips by 2027—technology poised to power AI data centers, smartphones, and more.

Entech Online (entechonline.com)

8   Apple Teases Redesigned MacBook Air with AI Features

Apple announced a teaser for a redesigned MacBook Air, set for a late-March 2025 launch. The update promises a thinner design, an OLED display, and the rumored M4 chip, positioning it as a leader in laptop innovation.
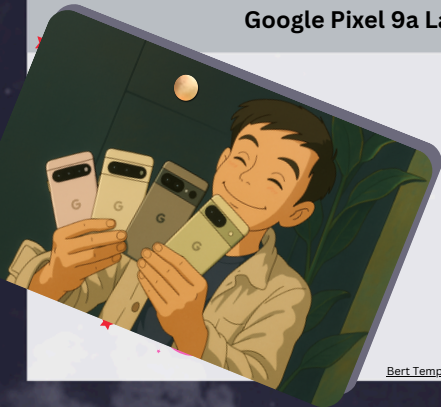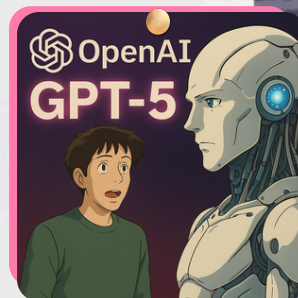
NASA Official Site (https://www.nasa.gov/)

Microsoft Announces Shutdown of Skype by December 2025   9

Microsoft announced that Skype will be phased out by December 2025, shifting focus to Microsoft Teams as the primary communication platform. This decision reflects the company's strategy to streamline its services and enhance collaboration tools.

TechRadar India

10   OpenAI Launches GPT-5 with Unmatched Multimodal Capabilities

GPT-5, its most advanced AI model yet, featuring multimodal capabilities that allow it to process text, images, audio, and even video in real time. GPT-5 introduces better contextual understanding, enhanced reasoning, and deeper integration with creative workflows, making it an ideal tool for content creation, AI-generated video editing, and automated customer support. With improved security measures and reduced bias, GPT-5 represents a major leap in AI's real-world applications.

SpaceX News(https://www.spacex.com/)

11 — Microsoft Introduces AI-Powered Windows 12

Microsoft officially announced Windows 12, built with AI-driven enhancements for better performance, security, and automation. The new OS includes real-time AI-powered search, automated task management, and deep Copilot integration, making it the most intelligent Windows release yet. With adaptive UI scaling and AI-driven energy efficiency, Windows 12 is set to revolutionize PC usability and productivity.

btw.media

NASA Launches SPHEREx Mission to Spectrally Map the Universe — 12

NASA successfully launched the Spectro-Photometer for the History of the Universe, Epoch of Reionization, and Ices Explorer (SPHEREx) mission from Vandenberg Space Force Base. With a budget of $400 million, the mission aims to create a detailed 3D map of the cosmos in near-infrared light, helping scientists study the origins of galaxies, water distribution in planetary systems, and the large-scale structure of the universe. Over its two-year journey, SPHEREx will scan the entire sky four times, capturing valuable data that could revolutionize our understanding of the early universe

techradar.com

13 — Trump's Tariffs Impact the Tech Sector, Causing Market Turbulence

The Trump administration imposed heavy tariffs, including a 25% levy on imports from Canada and Mexico and a 20% tariff on Chinese tech components. These new trade policies rattled global markets, leading to a sharp decline in tech stocks, particularly for companies like Apple, Intel, and Nvidia, which rely on international supply chains. Chipmakers and consumer electronics firms now face increased production costs, forcing them to explore alternative suppliers or pass on costs to consumers. This move could have long-term effects on global trade relations and innovation in the tech industry.

techradar.com

14 — Vodafone Idea Rolls Out 5G Across 75 Indian Cities

In a major leap for India's telecom sector, Vodafone Idea (Vi) officially launched its 5G services across 75 major Indian cities, stepping up competition against Jio and Airtel.

Vi's 5G rollout includes AI-powered network optimization to enhance connectivity speeds and affordable plans to attract new users. The launch aligns with India's push for digital transformation, aiming to boost smart city initiatives, industrial automation, and real-time AI applications. With this expansion, Vi hopes to revive its market position and bridge the connectivity gap in rural areas.

techradar.com

Firefly Aerospace's Blue Ghost Lander Successfully Touches Down on the Moon — 15

Firefly Aerospace's Blue Ghost lander made a historic soft landing on the Moon, carrying scientific instruments and commercial payloads for NASA and private space firms. This marks a significant milestone for lunar exploration, as Blue Ghost

will analyze the Moon's surface composition, radiation levels, and potential resources for future missions. The landing is part of NASA's Artemis program, which aims to establish sustainable human exploration on the Moon in the coming decades. With Firefly Aerospace proving its capability, private space ventures are playing an increasing role in deep-space missions.

techradar.com

SUBMARINE FIBRE OPTIC CABLE

Submarine fiber optic cables are the backbone of global internet connectivity, carrying over 95% of international data traffic. Given their critical role, these undersea cables have become focal points in geopolitical strategies, with concerns about potential sabotage aiming to disrupt economies and communications.

Economic Impacts 🌍📈

Global Financial Market Disruptions

- Stock exchanges, banking transactions, and high-frequency trading rely on real-time data transfer through these cables. Any disruption could lead to billions in losses within minutes.
- Example: In 2008, a severed cable in the Mediterranean caused slowdowns in Middle Eastern and Indian markets.

Impact on Trade & Ecommerce

- International businesses and supply chains depend on instant communication and online transactions.
- Companies like Amazon, Alibaba, and global logistics firms would face massive disruptions, leading to delays in imports/exports and revenue losses.

Bank & Payment System Failure

- Credit card transactions, SWIFT (global banking transactions), and cross-border payments rely on undersea cables.
- A major cut could cripple international banking, halt wire transfers, and disrupt economies.

Tech & Cloud-Based Business Collapse

- Most data centers for cloud computing are in North America and Europe. Cutting cables between these hubs and Asia/Africa could shut down services like Google Cloud, AWS, and Microsoft Azure in affected regions.
- Entire industries (software development, AI training, remote work, IT outsourcing) could grind to a halt.

Corporate & Government Communication Breakdown

- Governments rely on these cables for diplomatic, military, and intelligence communications.
- If critical connections are cut, business negotiations, cybersecurity defenses, and national security operations could be severely impacted.

SOCIETAL IMPACTS

Digital Blackouts
Attacks on undersea cables can cut off regions for weeks- like Tonga in 2022.

Online Service Collapse
Social media, messaging, and news go down— spreading panic & misinformation.

Healthcare at Risk
Cloud-based hospitals and emergency services face paralysis, endangering lives.

Political Unrest
Outages can trigger protests, weaken governments, or deepen authoritarian control.

Education Disrupted
Online learning halts, cutting off millions from education & global research.

Who would benefit from such attacks?

Nation States
Countries engaged in cyber warfare (e.g., US-China, Russia-NATO tensions) could target undersea cables to weaken their adversaries.

Terrorist Groups
Disrupting communications could create mass panic and economic crises.

Cybercriminals
Some groups may hold infrastructure hostage for ransom (cyber extortion).

GEOPOLITICAL INCIDENTS INVOLVING UNDERSEA CABLES

Baltic Sea Cable Disruptions
In November 2024, Two critical undersea data cables were severed
Suspected Actors: Chinese-Flagged Vessels
Impact: Heightened regional tensions

Red Sea Cable Damage
On February 2024, three undersea cables damaged
Suspected Actors: Exact cause remains under investigation; Hotspot due to the region's strategic importance
Impact: Fragility of global communication networks and economic disruption

Taiwan Strait Cable Severances
In Early 2025, undersea cables near Taiwan were severed
Suspected Actors: Chinese vessels under multiple flags
Impact: Exacerbated cross-strait tensions and highlighted risks to regional stability

STRATEGIC RESPONSES AND MEASURES

Enhanced Navy Patrols
NATO initiated "Baltic Sentry" in January 2025, deploying ships and surveillance assets to deter and respond to undersea infrastructure threats in the Baltic Sea

Infrastructure Investments
Countries like Denmark are investing in naval capabilities to protect subsea infrastructure, including acquiring vessels and drones for surveillance and defense.

International Collaborations
Allied nations are working together to secure undersea cables, recognizing their critical role in global security and economic stability.

Union Budget 2025-26: Science, Technology & Innovation Highlights

1. Research, Development, and Innovation
₹20,000 Crore allocated for a Private Sector-led R&D Fund.
Objective: Promote deep-tech innovation & strengthen India's autonomy in critical technologies.
Deep Tech Fund of Funds to support startups in advanced tech sectors.

2. Artificial Intelligence (AI)
India AI Mission gets ₹2,000 Crore allocation (huge increase from ₹173 crore last year).
Centre of Excellence in AI for Education.
Goal: Integrate AI into sectors like healthcare, education, governance.

3. Space Exploration
Gaganyaan Human Spaceflight Mission funding increased to $2.32 billion.
Future Targets:
Indian Space Station by 2035.
Crewed Moon Mission by 2040.

4. Nuclear Energy
₹20,000 Crore for development of 5 Indigenous Small Modular Nuclear Reactors (SMRs) by 2033.
Target: 100 GW of nuclear power capacity by 2047.
Supports India's Net-Zero goal by 2070.

5. Startups and Innovation Support
Electronics Manufacturing Incentives
$2.7 Billion Production Linked Incentive (PLI) Scheme.
Focus: Telecom, Automobiles, Energy.
Expected: ~92,000 jobs.

Government Schemes Supporting Startups

1. Startup India Seed Fund Scheme (SISFS)
Funding: Up to ₹20 lakh (Prototype) + ₹50 lakh (Market Entry).
Apply via: Startup India Portal

2. Atal Innovation Mission (AIM)
Programs:
Atal Tinkering Labs (ATLs) – Schools.
Atal Incubation Centres (AICs) – Startups.
Atal Community Innovation Centres (ACICs) – Rural innovation.
AIC Funding: Up to ₹10 crore over 5 years.

3. Technology Adoption Fund (IN-SPACe)
For early-stage space tech startups.
Funding Cap: ₹25 crore per project.

4. State-specific Programmes
StartInUP (Uttar Pradesh)
Total Approved Incentives: ₹137.25 crore.
Disbursed: ₹20.75 crore.
Portal: StartInUP

5. Other Important Schemes
Biotechnology Ignition Grant (BIG) — ₹50 lakh for biotech startups.
MSME Innovation Scheme — Financial assistance for product & design innovation.