



## SECTION 1 – TECH BUZZ

### ARTIFICIAL INTELLIGENCE



#### **PolyAI VOX 2023 Summit**

PolyAI, a leading player in the field of conversational artificial intelligence (AI), is all set to launch its inaugural virtual summit on November 16th. The event aims to delve into the ways innovative companies worldwide are harnessing cutting-edge AI advancements to enhance customer service interactions on a large scale.

- In today's fast-paced business landscape, companies are increasingly relying on bots and AI to elevate their customer experience. This trend prompts enterprises to grapple with important questions: How can customer-centric companies maintain competitive customer experiences at scale? Can AI alleviate the pressure on contact centers while actively enhancing customer experience? What's the deal with generative AI, and how can it be beneficial for your business? PolyAI VOX 2023 brings experts and practitioners to the virtual stage to address these pivotal queries.
- Nikola Mrksic, the CEO and co-founder of PolyAI, highlighted the significance of this event, stating, "This platform enables industry leaders to collaborate and gain real-time insights from their forward-thinking counterparts across different sectors. Participants can directly engage with industry giants who have successfully launched AI-powered initiatives, as well as top-notch machine learning engineers and contact center architects.
- Instead of grappling with critical questions about customer experience in isolation, attendees will receive insider analysis on the choice between building and buying

solutions. They will also learn about the automation journey firsthand and understand how to assess the ever-evolving risks and benefits associated with deploying enterprise AI."

- The sessions planned for the summit will provide actionable insights on a range of topics, such as maintaining a human touch in automation and empowering customers to take the lead. Attendees will also explore leveraging AI for competitive advantage and customer-driven conversations in the era of generative AI. Additionally, participants will gain an exclusive preview of the next-generation developments that PolyAI plans to introduce soon.
- PolyAI specializes in creating customer-led voice assistants that engage in natural conversations with customers to solve their problems. These voice assistants possess the unique ability to comprehend customers, regardless of their choice of words or tone. PolyAI caters to enterprises where customer conversations are integral to their operations. Its clientele includes visionaries in global banking, hospitality, home services, insurance, retail, and telecommunications, as well as public sector entities and organizations.

## AI-Powered Custom Course Solution

Global eTraining, a leading provider of online education tailored for the architecture, engineering, construction, and manufacturing sectors, is thrilled to introduce a groundbreaking advancement in their custom course building solution – the integration of artificial intelligence (AI). This innovative feature reflects the company's unwavering commitment to pushing the boundaries of innovation and transforming how professionals create and engage with training content.

- This cutting-edge AI integration empowers users to effortlessly generate customized courses tailored to their specific needs within seconds, eliminating the traditional challenges associated with custom content building.

Here are the key features of Global eTraining's new AI-powered solution:

- **Choose a Topic:** Users can select a topic or subject of interest, with the flexibility to be as specific as they desire.
- **Adjust Preferences:** Tailor the complexity and duration of the course according to individual requirements.
- **Select the Language:** Customize the language of the course to cater to specific needs.
- **Preview Table of Contents:** AI rapidly generates a comprehensive table of contents, enabling users to preview and edit before finalizing the course.
- **Instantly Generate Courses:** With a simple click, users can generate a complete course, including lectures, topics, slides, text, and audio, seamlessly incorporated.
- **Edit and Expand:** Users can modify topics and slide titles, and utilize AI to add new content, enriching the course further.
- **Pause and Revisit:** The AI system remembers the context of the course, allowing users to return and edit content at any time, building upon the existing structure.
- With Global eTraining's AI integration, tasks that previously took hours or even days, such as formulating a comprehensive table of contents, crafting engaging content, and integrating multimedia elements seamlessly, can now be accomplished in mere seconds.

This revolutionary approach simplifies the course development process, making it more accessible and efficient for professionals in the AEC industry.

- John Doe, Chief Technology Officer of Global eTraining, expressed his excitement about this innovation, stating, "The introduction of our AI solutions marks a pivotal moment in the AEC industry. We understand that the most significant hurdle in course development is getting started. With this ground-breaking new feature, we've eradicated this barrier, streamlining the path towards comprehensive company and project-specific training."
- This advancement exemplifies Global eTraining's commitment to providing cutting-edge solutions that empower AEC professionals to thrive in an ever-evolving industry. The AI-powered feature is now live and available for early adoption to Global eTraining clients with a license of their course authoring technology.
- To get started with this revolutionary solution, interested parties can access a complete overview and demo on the Global eTraining website or visit their booth at industry events. Global eTraining continues to be the go-to choice for architects, engineers, construction, and manufacturing firms, offering custom workflows, industry trend insights, and training solutions designed to enhance efficiency and profitability.

## **Unlocking AI Potential In Africa**

South African Minister in the Presidency, Mondli Gungubele, emphasized the importance of unlocking the economic potential of artificial intelligence (AI) in Africa during his address at the Artificial Intelligence Expo Africa. Speaking on the theme of "Building an AI-Powered Future for Africa," Gungubele highlighted how AI has garnered global attention and collaboration across various sectors.

- According to Gungubele, governments in Africa should adopt a forward-thinking approach to AI adoption while ensuring that the workforce is equipped with a diverse skill set to adapt to an AI-driven economy.
- He stressed the need to mitigate potential risks associated with AI, as it has the power to create both positive and negative situations. Gungubele referenced Professor Klaus Schwab, the founder and chairman of the World Economic Forum, who likened data to the new oil, emphasizing the importance of responsible data usage to prevent catastrophic consequences.
- Addressing concerns about biases and discrimination in AI, Gungubele acknowledged the global challenge of tackling these issues, emphasizing the significance of using high-quality data to avoid flawed or inadequate models.
- He urged teachers to accept AI as a fundamental part of the future, especially in sectors like education and law, where AI tools like ChatGPT are increasingly being utilized.
- Gungubele emphasized the need to harness the power of data to enhance learning and expand knowledge while remaining vigilant against misinformation and misuse that could distort the capabilities of the human brain.
- Gungubele also discussed the development of global regional AI partnerships, acknowledging their advantages and disadvantages from regional and continental perspectives.

- He emphasized the importance of inclusive approaches and ethical considerations in AI, suggesting that African governments assess the ethical dimensions of AI frameworks established by various global bodies.
- Furthermore, he urged governments to demonstrate thought leadership by responsibly procuring and using AI tools to promote inclusive economic growth in the continent.

## **MACHINE LEARNING**

### **DeepSpeed-FastGen Enhances LLMs**

Microsoft has introduced the alpha release of DeepSpeed-FastGen, a cutting-edge system geared towards enhancing the deployment and serving of large language models (LLMs). This innovative technology combines the strengths of DeepSpeed-MII and DeepSpeed-Inference, forming the powerful amalgamation known as DeepSpeed-FastGen.

- The system is underpinned by the Dynamic SplitFuse technique, a groundbreaking token composition strategy for prompt processing and token generation.
- DeepSpeed-FastGen leverages SplitFuse to achieve up to 2.3 times higher effective throughput compared to systems like vLLM. This technique allows the system to maintain a consistent forward size by processing partial tokens from prompts and integrating them with generation.
- Consequently, this approach results in heightened responsiveness, efficiency, and reduced variance. In practical terms, it translates to lower latency and higher throughput streaming generation for all clients, surpassing other serving systems.
- FastGen incorporates innovative batch scheduling methods, efficient key-value cache management, communication-optimized tensor parallelism, and ultra-fast CUDA kernels. Additionally, it integrates a low-overhead load balancer that ensures perfect linear scaling across numerous replicas, enhancing the system's performance and scalability.
- In terms of performance metrics, DeepSpeed-FastGen outperforms vLLM in both throughput and latency. It achieves equivalent latency with greater throughput or offers more responsive latency while maintaining the same throughput. For instance, on Llama-2 70B with 4 A100x80GB, DeepSpeed-FastGen demonstrates up to 2 times higher throughput (1.36 requests per second vs. 0.67 requests per second) at identical latency (9 seconds) or up to a 50% reduction in latency (7 seconds vs. 14 seconds) while maintaining the same throughput (1.2 requests per second).
- Moreover, DeepSpeed-FastGen implements replica-level load balancing, evenly distributing requests across multiple servers and enabling seamless scalability. With 16 replicas, the throughput reaches 23.7 queries per second, marking a linear 16x increase compared to a single replica setup.
- DeepSpeed-FastGen currently supports various model architectures, including LLaMA, LLaMA2, Mistral, and OPT. These models utilize HuggingFace APIs in the backend to provide both the model weights and the corresponding tokenizer. Microsoft plans to expand its repertoire by adding more models in the future. Moreover, DeepSpeed-FastGen offers two deployment options: an interactive non-persistent pipeline for

temporary interactive sessions and a persistent serving deployment designed for long-running and production applications.

- DeepSpeed, developed by Microsoft, is an open-source deep learning optimization library for PyTorch. It simplifies distributed training and inference, making them efficient and effective. This library aims to reduce computing power and memory usage while enabling the training of large distributed models with improved parallelism on existing computer hardware. Key features of DeepSpeed include the Zero Redundancy Optimizer (ZeRO), mixed precision training, and support for single-GPU, multi-GPU, and multi-node training.
- Developers interested in exploring DeepSpeed-FastGen can refer to the Getting Started guide and visit the DeepSpeed-MII GitHub repository for detailed information. Additionally, those keen on contributing to the project can find more details in the contributing guide.

## VIRTUAL REALITY

### Viture One XR glasses

Introducing the Viture One XR glasses – a ticket to a portable, virtual 120-inch screen experience for gaming and movie watching wherever you go. These innovative glasses seamlessly connect to your smartphone, laptop, or Nintendo Switch via USB-C, transforming into a functional monitor.

- What sets them apart is their unique feature: an optional neckband computer running Android, enabling cloud gaming, remote play from consoles, and movie streaming from platforms like Netflix.
- The buzz around Viture One XR glasses began when they raised a staggering \$3 million on Kickstarter, surpassing the original Oculus Rift. Now, after a year, these mixed-reality glasses are finally reaching the hands of backers. I got my hands on the Viture One Ultimate Pack, which included the neckband, mobile dock, and some extra goodies. While they represent a step forward in XR technology, there's still room for improvement, especially in terms of comfort and user experience.
- But first, let's break down what XR means. It's an umbrella term encompassing VR (virtual reality), AR (augmented reality), and MR (mixed reality). While VR has carved out a niche, the spotlight is now on mixed and augmented reality, with products like Apple's Vision Pro generating excitement. The Viture One XR glasses fit into this category, offering a unique experience that blends the virtual and real worlds.
- In terms of design, the Viture One XR glasses are compact and sleek, weighing only 78 grams. They project a translucent screen on top of the real world, allowing you to interact with your surroundings while enjoying your favourite games and movies. However, achieving the perfect fit and focus can be challenging, leading to some discomfort. The glasses come with adjustable nose pads and diopter dials, but finding the right position can be a bit frustrating. Despite the efforts to improve comfort, they might not be the most comfortable glasses you'll ever wear.

- In terms of functionality, these glasses cater primarily to entertainment, focusing on gaming experiences. They can be connected directly to smartphones, laptops, and PCs with USB-C ports, mirroring the screen effortlessly. The neckband option, which functions as a wearable Android computer, provides a wireless and hands-free experience. With Android games and popular streaming apps available, it offers convenience and flexibility.
- The visual experience on the Viture One XR glasses is impressive, emulating a 120-inch screen with a resolution of 1920 x 1080 pixels at 60 frames per second. However, the pixel density and sharpness might not match high-end smartphones. The glasses can reach a brightness level of 1,800 nits, ensuring clear visuals, especially in dark environments. To enhance the viewing experience, there's an electrochromic film that darkens the lenses and optional lens covers.
- Despite the progress, challenges remain. Comfort issues persist, and the glasses require careful adjustment for an optimal experience. However, the Viture One XR glasses represent a significant step forward in the world of XR technology, offering a glimpse into the future of immersive entertainment. As the industry continues to evolve, we can expect even more refined and user-friendly products in the coming years.

## GAMING

### CoD: Enduring Gaming Success

James Spratt fondly recalls his teenage years, dashing home from school with excitement to join his friends online in epic battles within the global video game phenomenon, "Call of Duty." Developed by Activision Blizzard two decades ago, this franchise has not only defined the military shooter game genre but also amassed a staggering revenue of over \$30 billion.

- Spratt, now 30 years old and residing in Britain, has turned his passion for "CoD" into a career. He shares his exceptional sniper skills on his YouTube channel, astonishing his father and inspiring gamers worldwide. Reflecting on his early experiences, Spratt reminisces, "At school, we were racing home basically to get a squad of six together because if you missed out on being with your friends, you were playing by yourself. There was something about that game that just kept me coming back every year; I was hooked."
- The first installment of "Call of Duty," created by Infinity Ward studio, was published by Activision in October 2003. Since then, the franchise has maintained an annual release cycle, with "Modern Warfare 3" marking the latest addition released on November 10.
- This consistent release pattern has become a cherished tradition among gamers, akin to an "ingrained holiday," according to Johanna Faries, the general manager of "Call of Duty." Players eagerly anticipate each new release, setting their clocks to the unveiling of fresh content and thrilling gameplay experiences.
- The success of "Call of Duty" can be attributed not only to its yearly releases but also to its diverse themes, spanning World War II, modern warfare, and clandestine "black ops" missions.



- The game's ability to continually refine its online multiplayer aspect has further endeared it to players like Spratt and his friends, transforming gaming sessions into lively group activities. "It wasn't just the game itself, but it's what 'Call of Duty' represented - each year you had a massive community that was continuing to grow," Spratt remarked. "You could talk about it with someone down in the garage or down at the shop or people online - everyone just seemed to know what 'Call of Duty' was."
  - Remarkably, "Call of Duty" has transcended generational boundaries. What began as a teenage pastime has evolved into a shared experience among people of all ages. Spratt notes that his partner's nieces, nephews, and even her brother-in-law are avid players, highlighting the game's universal appeal.
  - A testament to the game's enduring popularity, the Call of Duty community on Reddit boasts 1.2 million members, bonding over cherished moments from past installments and eagerly discussing the newest versions.
  - The franchise's rise to prominence was catapulted by the launch of "Call of Duty 2" on Microsoft Xbox 360 consoles in 2005. With more than 70 percent of Xbox 360 buyers also purchasing the game, "Call of Duty" became synonymous with the console, marking a pivotal moment in its history. Subsequent releases, such as "Call of Duty 4: Modern Warfare," further solidified the franchise's blockbuster status, thanks to enhanced multiplayer capabilities that captivated gamers worldwide.
  - "Call of Duty" stands as a prime example of a "forever game," offering compelling content and community features that make it a go-to choice for players seeking immersive gaming experiences. As the best-selling premium video game franchise in the United States for over a decade, "Call of Duty" continues to captivate audiences with each new installment. Its enduring success has elevated it to a prominent position in the dynamic global entertainment landscape, making it a source of pride for both developers and players alike.
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## **SECTION 2 – GLOBAL INFO**

### **EUROPE**

#### **UKRAINE**

The European Union's executive body is set to announce its recommendation on Wednesday regarding Ukraine's readiness to begin formal membership negotiations, marking a significant step forward for Kyiv's aspiration to join the bloc. Ukraine initiated its bid to become an EU member shortly after Russia's full-scale invasion in 2022 and was officially recognized as a candidate in June of the following year.

- The European Commission will now assess Ukraine's progress in implementing initial reforms. The decision on whether to commence formal talks will ultimately rest with the EU's 27 leaders, who will convene at a summit in December. There is a prevailing anticipation in Brussels that both Ukraine and its ex-Soviet neighbour, Moldova, will receive the Commission's endorsement to proceed to the next phase of the membership process.
- Commission President Ursula von der Leyen commended Kyiv for achieving significant milestones in meeting seven reform benchmarks established by Brussels. These benchmarks encompassed crucial areas such as combating corruption and reducing the influence of oligarchs. Von der Leyen expressed her confidence in Ukraine's ability to attain its ambitious goal, emphasizing the historic importance of initiating the accession negotiation process within the current year. She made these remarks during her visit to Ukraine's parliament in Kyiv.

## **ASIA**

### **NORTH KOREA**

North Korean state media strongly criticized the upcoming visits to Seoul by top US officials, denouncing them as provocative actions that would escalate tensions in the region. US Secretary of State Antony Blinken arrived in Seoul on Wednesday, where he will meet his South Korean counterpart Park Jin on Thursday to discuss various issues, including concerns related to nuclear-armed North Korea, as stated by Seoul's foreign ministry. Following Blinken's two-day trip, US Secretary of Defence Lloyd Austin is expected to visit Seoul next week for minister-level meetings.

- A commentary published by the Korean Central News Agency described the visits of these "uninvited guests from across the ocean" as an attempt to incite extreme confrontation on the Korean peninsula, which is already considered one of the most volatile hotspots in the world, reaching a critical point of explosion.
- The commentary drew parallels between these visits and past instances of warmongers conducting field inspections, raising fears of sparking a second Korean war.
- The commentary emphasized that Blinken and Lloyd's visits would cast "new war clouds" over the region, indicating North Korea's deep concerns about the potential consequences of these diplomatic engagements.

## **OCEANIA**

### **AUSTRALIA**

On Wednesday, over 10 million Australians experienced widespread disruptions in internet and phone services due to unexplained outages affecting one of the country's largest communications companies, Optus.

- The company swiftly launched efforts to identify and resolve the issues, which not only crashed electronic payment systems but also severely impacted phone lines crucial for emergency services.



- Optus CEO, Kelly Bayer Rosmarin, assured the public that there was no evidence suggesting a hacking or cyberattack behind the outage.
  - In an interview with national broadcaster ABC, she stated, "Our team is tirelessly exploring all possible causes. We've tested several hypotheses and implemented various measures, but none have addressed the core problem yet."
  - Rosmarin emphasized the company's commitment to finding the root cause and restoring services, promising to update the public as soon as more information became available.
  - The outage had a significant impact, affecting mobile phones, landlines, and broadband internet services across the country. The Australian government acknowledged the scale of the disruption, highlighting the widespread reach of the service outages.
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## **SECTION 3 – MIXED BAG**

### **HEALTH**

#### **New Technology Set To Benefit Thousands With Diabetes**

Over 150,000 adults and children with type 1 diabetes in England and Wales will soon have access to groundbreaking technology through the NHS, according to final draft guidance from the National Institute of Health and Care Excellence (Nice). The guidance recommends the use of a wearable device known as a hybrid closed loop system, colloquially referred to as an artificial pancreas, for individuals whose diabetes is not well-controlled by their current pump or glucose monitor.

- The hybrid closed loop system consists of a continuous glucose monitor sensor attached to the body, which transmits data to a body-worn insulin pump. This pump calculates the required insulin dosage and delivers it precisely to the body, eliminating the need for frequent finger prick blood tests or insulin injections to manage blood sugar levels. This innovative technology has proven to be more effective in maintaining blood sugar levels within a healthy range, thus reducing the risk of diabetes-related complications.
- Nice has collaborated with NHS England to ensure that children, young people, pregnant or planning-to-be-pregnant women, and individuals already using an insulin pump will be the first to receive the hybrid closed loop system as part of a five-year rollout plan. Following this initial phase, the technology will be extended to adults with an average HbA1c reading of 7.5% or higher, as well as those experiencing abnormally low blood sugar levels. Nice recommends maintaining an HbA1c level of 6.5% or lower for optimal diabetes management.
- Professor Jonathan Benger, chief medical officer at Nice, emphasized the importance of prioritizing cost-effective technologies to improve patient outcomes and reduce healthcare expenses. Implementing hybrid closed loop systems, he stated, will significantly benefit individuals with type 1 diabetes by maintaining recommended blood glucose levels, thereby preventing complications like hypoglycemia, strokes, and heart

attacks, which often lead to costly NHS care. This advancement not only enhances patients' health and well-being but also offers long-term cost savings for the NHS.

- Due to the necessity for additional staff and specialized training for patients and healthcare professionals, Nice has approved a funding variation request from NHS England for a phased rollout spanning five years. The final guidance is anticipated to be published in December.
- In the UK, approximately 400,000 people, including 29,000 children, live with type 1 diabetes. Colette Marshall, chief executive of Diabetes UK, welcomed the recommendations, acknowledging the potential to transform the lives of many individuals with type 1 diabetes, enhancing both their health and quality of life. She emphasized the critical need for funding to ensure equitable access to this technology for all eligible individuals and urged the government and the NHS to collaborate on this initiative.
- Dr. Partha Kar, national specialty adviser for diabetes, expressed enthusiasm about the positive impact of this technology on the lives of people with type 1 diabetes. He commended the NHS for their dedication to testing and implementing cutting-edge innovations, describing the hybrid closed loop system as a significant step toward a fully automated diabetes management system, allowing individuals to live their lives without constant concerns about glucose levels or medication.

## **SPACE**

### **Europe's Euclid Space Telescope Unveils Cosmic Mysteries**

Europe's Euclid space telescope has unveiled its first captivating images, providing a glimpse into the mysteries of the universe. Launched in July on a groundbreaking mission to explore the enigmatic realms of dark matter and dark energy, Euclid has already started reshaping our understanding of the cosmos. During a press conference at the European Space Operations Centre in Darmstadt, Germany, the European Space Agency (ESA) unveiled the initial five images captured by Euclid, showcasing celestial wonders never seen before.

- Among the striking images is a nebula resembling a horse's head, distant galaxies that have never been observed, and intriguing "circumstantial evidence" of elusive dark matter. Euclid's mission involves charting one third of the sky, encompassing an astonishing two billion galaxies, with the goal of creating the most precise 3D map of the universe ever assembled. Positioned approximately 1.5 million kilometers (more than 930,000 miles) from Earth, alongside the James Webb Space Telescope, Euclid is equipped to capture vast areas of the sky with remarkable precision and speed.
- One of the standout images captured by Euclid is the Perseus Cluster, a distant collection of over a thousand galaxies. In the background of this cluster, Euclid detected more than 100,000 additional galaxies, some located 10 billion light years away, previously unseen by astronomers. What sets Euclid apart from other space telescopes is its ability to observe a broad field of view, allowing it to swiftly capture comprehensive images without the need for stitching together multiple observations.
- Euclid, dubbed the "dark universe detective" by the ESA, aims to unravel the mysteries surrounding dark matter and dark energy, which together constitute 95 percent of the

universe. Dark matter's gravitational pull shapes galaxies and contributes to their rapid spin, while dark energy drives the universe's accelerated expansion. Early observations from Euclid have hinted at potential signs of dark matter, sparking excitement among scientists.

- Euclid's groundbreaking images are not without challenges. Initially, the spacecraft's fine guidance sensor was affected by cosmic rays, but the team swiftly addressed the issue by uploading new software. Additionally, sunlight reflecting off a thruster boom required minor adjustments to the telescope's position. Despite these engineering hurdles, the mission has successfully achieved its initial milestones, allowing scientists to focus on unravelling the universe's secrets.
- Euclid's mission promises to revolutionize our understanding of the cosmos, offering a glimpse into the universe's distant past and shedding light on the fundamental forces shaping its evolution. As Euclid continues its six-year mission, scientists eagerly anticipate future data releases, which will pave the way for new discoveries and insights into the universe's mysterious dark components.

## CLIMATE CHANGE

### Urgent Climate Action Needed

In October, the world experienced its hottest month ever recorded, according to Europe's climate monitor. This unprecedented heat, coupled with exceptionally high temperatures in the preceding months, is on track to make 2023 the warmest year in history.

- Scientists are alarmed by the drastic rise in temperatures, emphasizing the urgent need for global leaders to take immediate action to reduce greenhouse gas emissions. As world leaders prepare to convene in Dubai for the UN COP28 climate conference, the pressure to address climate change has never been greater.
- During October, certain regions of the United States and Mexico suffered from severe droughts, while other parts of the world experienced unusually wet conditions due to storms and cyclones, as reported by the EU's Copernicus Climate Change Service (C3S). Additionally, sea surface temperatures reached unprecedented levels for the month, a consequence of global warming that intensifies storms and their destructive capabilities.
- Samantha Burgess, Deputy Director of C3S, highlighted the exceptional temperature anomalies in October, following a trend of record-breaking global temperatures over the past four months. She stated that 2023 is poised to become the warmest year on record, with temperatures currently surpassing the preindustrial average by 1.43 degrees Celsius. The Paris Agreement, which aimed to limit global warming to well below two degrees Celsius, seems increasingly challenging to achieve in the face of these alarming developments.
- This year also marked the beginning of an El Niño weather phenomenon, which warms waters in the southern Pacific and contributes to hotter weather globally. Scientists predict that the most severe effects of El Niño will be felt toward the end of 2023 and into the next year. October's temperatures were 1.7 degrees Celsius higher than the estimated October average for the preindustrial era, as stated by Copernicus.

- Global average temperatures since January have consistently been the highest since records began in 1940, exceeding the pre-industrial average by 1.43 degrees Celsius. Furthermore, proxy data, such as tree rings and ice cores, suggests that this year's temperatures could be unprecedented in human history, potentially the warmest in over 100,000 years.
- Rising sea surface temperatures, caused by human-induced heat absorption by the oceans, are contributing to more intense storms and the melting of vital ice shelves in Greenland and Antarctica. This poses a significant threat of destructive sea level rise. Additionally, warmer atmospheres hold more moisture, leading to heavier rainfall and increased flooding events.
- World leaders gathering for the COP28 conference in the United Arab Emirates will face a harsh reality check as they confront a damning progress report on the world's Paris Agreement pledges.
- Major scientific reports indicate that the world is significantly off track in meeting its climate goals. Carbon emissions, primarily from fossil fuels, continue to rise, despite the urgent need to reduce them by half in this decade.
- The consequences of the temperature rise are already evident, with people worldwide enduring heatwaves, droughts, and severe flooding. Record wildfires in Canada, exacerbated by climate change, released more carbon dioxide than the country's total 2021 greenhouse gas emissions.
- Scientists warn that humanity has entered "uncharted territory," with warming trends that threaten life on Earth. Lead author William Ripple, a professor at Oregon State University, expressed concerns that annual average temperatures could soon surpass the 1.5-degree Celsius threshold, leading to irreversible climate changes.
- The situation underscores the critical importance of immediate and substantial climate action to prevent further escalation of these catastrophic events.

## **BUSINESS**

### **US Trade Deficit Widens**

In September, the United States experienced a significant expansion in its trade deficit, driven by a notable increase in imports compared to exports, as per data released by the government. The trade gap for the world's largest economy exceeded expectations, reaching \$61.5 billion, up from a revised \$58.7 billion in August, as reported by the Commerce Department.

- This widening gap was primarily due to imports rising by 2.7 percent to \$322.7 billion, while exports grew by 2.2 percent to \$261.1 billion. Consumer spending, supported by pandemic-era savings, played a role in boosting US trade. However, the imposition of higher interest rates, aimed at curbing inflation, was anticipated to dampen demand, potentially affecting exports. Additionally, the slowdown in economic growth among key US trading partners following tightening monetary policies might further impact exports.
- September's surge in imports was driven by consumer goods like cell phones and household items, as well as automotive vehicles and parts. Economist Matthew Martin from Oxford Economics pointed out that while both exports and imports are expected to

decline in the coming months, imports might suffer more due to reduced consumer spending and businesses depleting their inventory levels. Furthermore, a weakening global economic outlook and the robustness of the US dollar are anticipated to hamper export growth.

- The Commerce Department noted that the increase in the US trade deficit in September was a result of a larger goods deficit and a decrease in the services surplus. Specifically, the US goods deficit with China, a focal point during the trade tensions between the two nations, expanded to \$24.1 billion in September.
- Rubeela Farooqi of High Frequency Economics observed that trade had a minor negative impact on the GDP in the third quarter. Looking ahead, she anticipates a modest contribution from net exports in the fourth quarter, based on preliminary estimates.

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