

Wednesday, November 22, 2023 (Daily E-booklet on Artificial Intelligence, VR, Tech, Robotics, Coding, Global Info, Health, Science & more)

SECTION 1 – TECH BUZZ

ARTIFICIAL INTELLIGENCE



Meta's Emu Gets Video, Image Editing Abilities

Meta's foundational image generation model, Emu (Expressive Media Universe), is undergoing a significant enhancement, enabling it to generate videos from text and facilitating precise image editing for users.

Originally introduced at the Meta Connect event in September, Emu plays a crucial role
in various generative AI experiences across Meta's social media platforms. This includes
powering AI image editing tools on Instagram, enabling users to alter a photo's visual
style or background. Emu is integrated directly into Meta AI, the company's assistant
platform comparable to OpenAI's ChatGPT.

The upgraded Emu Video model has the capability to generate videos based on natural language text, images, or a combination of both. In contrast to Meta's previous video generation model, Make-a-Video, Emu Video employs two diffusion models instead of five, streamlining the content creation process:

- Generates an image based on a text prompt.
- Creates a video conditioned on both the text and image prompts.

This simplified approach enhances the efficiency of training video generation models, as stated by Meta. Users overwhelmingly preferred Emu Video over Make-a-Video, with 96% favouring

it for quality and 85% for adherence to the text prompt. Emu Video can also animate user-uploaded images based on text prompts, providing a dynamic experience.

- The Emu Video demo page allows users to explore the capabilities of this model by presenting various text and image inputs.
- In addition to the video generation update, Meta introduced Emu Edit, empowering users to modify images using natural language commands. Users can upload an image and specify changes, additions, or alterations they desire. For instance, they can remove or replace elements within the image by simply typing in their requests.
- While AI-powered image alteration tools exist, Meta's researchers argue that existing methods either over-modify or under-perform on editing tasks.
- The emphasis with Emu Edit is on precise alterations, ensuring that only the relevant pixels are modified based on the edit request. This approach incorporates computer vision tasks as instructions to provide unprecedented control in image generation and editing.
- Emu Edit was trained using a dataset comprising 10 million synthesized images, each accompanied by input images, task descriptions, and targeted output images. The model strictly adheres to provided instructions, leaving aspects of the input image unrelated to the task unaltered.
- To showcase Emu Edit's capabilities, Meta released the Emu Edit Test Set, a benchmark featuring seven image editing tasks, such as background alteration and object removal, facilitating further testing of image editing models. Interested users can explore Emu Edit generations on Hugging Face.

Nvidia Boosts AI Performance

Nvidia CEO Jensen Huang has announced an accelerated effort to enhance inferencing performance through the company's latest hardware developments, hot on the heels of the introduction of the new H200 chips.

- Addressing attendees at the recent ai-PULSE tech conference in Paris, Huang highlighted the capabilities of the H200 chips, emphasizing their ability to double inferencing performance "without changing anything" in the existing system or software stack.
- The H200 chips, unveiled as the successors to Nvidia's flagship H100s, are expected to significantly reduce costs for users while delivering improved performance. Huang expressed the company's commitment to enhancing hardware capabilities to meet evolving industry needs.
- In addition to the advancements with the H200 chips, Nvidia is intensifying efforts for the Grace Hopper 200 Superchip. The new hardware is designed to expand chip interconnections from eight GPUs to 32, effectively creating a virtual giant GPU, according to Huang.
- During his presentation, Huang also touched on the global landscape of AI development. He emphasized the importance of each country and region developing its sovereign AI, acknowledging the unique languages and cultures that should be reflected in foundational AI models.
- Huang pointed out that the second wave of AI will involve the global expansion of generative AI and the integration of AI across various industries beyond traditional

- internet service companies. He emphasized the need for diverse companies and industries to benefit from AI technologies.
- Highlighting the significance of open source in AI development, Huang commended European champions of open source AI such as Demis Hassabis, CEO of Google DeepMind, and Yann LeCun, Meta's chief AI scientist. Expressing his support for open source initiatives, Huang credited the progress AI has made in the last decade to collaborative efforts in the open-source community.
- Nvidia, a supporter of open source AI, is among the backers of Hugging Face, an open-source AI platform housing major models. Huang praised the work of Hugging Face, emphasizing the platform's role in maintaining the vibrancy of the AI ecosystem and promoting safety and responsibility in AI development. He underscored the essential nature of open-source technology, culture, and social engagement in advancing AI innovation and ensuring its ethical use.

Sam Altman: the 'super optimistic' star of AI

After the unexpected removal of former OpenAI CEO Sam Altman by Microsoft, the tech giant is securing a prominent figure in the artificial intelligence (AI) landscape. Altman, a 38-year-old entrepreneur, had played a pivotal role as the public face of OpenAI's rapid ascent in the competitive AI domain.

- His sudden departure from the OpenAI board sent shockwaves through Silicon Valley, where he, alongside Tesla chief Elon Musk and others, co-founded the research company in 2015 with the ambitious goal of developing generative AI for the benefit of humanity.
- Altman, known for his visionary outlook, emphasized in a 2021 blog post that the technological progress expected in the next century would surpass advancements since the discovery of fire and the invention of the wheel. Last year, the launch of ChatGPT, a generative AI platform, garnered significant attention for its humanlike ability to generate responses to various queries, from essays to recipes and computer code.
- However, the rise of AI has also raised concerns about job displacement and potential
 existential threats. Despite Altman's removal from OpenAI's board, the reason behind the
 decision remains undisclosed. His successor, former Twitch CEO Emmett Shear, denied
 reports suggesting safety concerns regarding AI usage.
- Expressing his sentiments on Twitter, Altman acknowledged his love for his time at OpenAI, describing it as transformative personally and, hopefully, for the world.
 Microsoft, a financial supporter of OpenAI, promptly announced Altman's recruitment to lead a new advanced AI research team.
- Born in 1985, Altman, originally from a St. Louis suburb, demonstrated an early interest in computers, receiving his first at the age of eight. His journey included dropping out of Stanford University to establish Loopt, a company acquired in 2012 for \$43.4 million. During a year-long break, Altman delved into diverse fields such as nuclear engineering, synthetic biology, investing, and AI, setting the foundation for his later endeavours.
- Altman's tenure as president of Y Combinator, a startup accelerator, showcased his deep thinking and intense focus, according to those who worked with him. His subsequent shift towards AI reflected a commitment to exploring transformative technologies.

- Proposing a future where AI, robotics, and cost-free energy could facilitate machines handling all work while providing a basic income, Altman advocated for technology-driven wealth creation and equitable distribution through policy.
- Altman's engagements with the US Congress and world leaders underscore his
 commitment to addressing AI's risks and the need for regulatory measures. Described as
 a "prepper," Altman, with preparations for apocalyptic scenarios, balances his intense
 professional focus with personal pursuits like high-performance sports cars, rented planes
 for California flights, and strategic yearly goal-setting.
- In a podcast with TED curator Chris Anderson, Altman expressed optimism about the positive trajectory of technology, despite acknowledging the unpredictability of the future. Just before his termination, he highlighted the challenges posed by the "new stuff" and the uncertainties that lie ahead.

VIRTUAL REALITY

Pico To Challenge Meta's VR Monopoly

Pico entered the scene with aspirations to challenge Meta's VR dominance, but recent developments have left the company in a precarious state, causing concern among studios, fans, and the VR industry at large. The question now is: What led to Pico's current struggles?

- In 2021, Bytedance, the owner of TikTok, acquired the Chinese headset manufacturer. The Pico 4, introduced to the Western market in the fall of 2022, aimed to be the first standalone VR headset rivaling Meta Quest 2 in both technology and price. Its arrival was hailed by the press as a positive move for competition. However, Pico failed to gain significant market share, particularly as the device was never released in the US.
- Rumors have been circulating for weeks about a major restructuring within the company, including significant layoffs, cancelled software projects, and a shift in product strategy moving away from Meta's approach toward an Apple-inspired direction.
- While Pico has officially stated its commitment to investing in the platform's future, the details remain unclear. Will there be a successor to the Pico 4? To what extent will the company continue funding VR content?
- The reports of internal changes and Pico's vague communication raise doubts about the platform's viability for VR studios and consumers. Pico initially launched a single product for Western consumers, and it's already displaying signs of weakness after achieving only moderate success. This prompts questions about whether the company's executives underestimated the substantial time and financial investment required to compete with Meta.
- Following the Pico 4 release last year, concerns were raised about the long-term commitment of both Pico and its parent company, Bytedance. The virtual reality business demands perseverance, especially when competing against an industry giant like Meta. If Bytedance scales back its investments prematurely, Pico's ecosystem could crumble before gaining traction.

- The harsh reality of the VR industry is evident in its history, marked by failed platforms. Companies like Samsung and Google, which dabbled in VR but eventually abandoned the platform due to a lack of immediate success, serve as cautionary examples. VR and AR are inherently risky ventures that require a long-term commitment.
- Even established players like Valve and Sony faced challenges. Valve's VR efforts seemingly stalled after Half-Life: Alyx, and Sony admitted that Playstation VR 2 isn't its primary focus. The article expresses skepticism about Apple's future in VR, highlighting the importance of companies taking a long-term perspective and delivering on promises, with Meta and potentially Apple being seen as more likely to do so.

SOFTWARE

.NET Aspire: Cloud-Native Development

Microsoft has introduced .NET 8, showcasing a groundbreaking feature known as .NET Aspire. This is a novel, cloud-native development stack tailored for constructing robust, observable, and configurable cloud-native applications within the dotnet framework. .NET Aspire incorporates a curated collection of components, bolstered for cloud-native environments, featuring service discovery, telemetry, resilience, and health checks as default functionalities.

- Positioned as an opinionated stack, .NET Aspire empowers developers and teams to
 effortlessly develop, provision, deploy, configure, test, run, and monitor cloud
 applications. The inaugural preview of .NET Aspire is now bundled with the release of
 .NET 8, with the anticipated general availability set for the spring of 2024 as an integral
 component of .NET 8.
- Beyond its core features, .NET Aspire elevates the landscape of application development through its orchestration capabilities, facilitating seamless execution and interconnection of multi-project applications and their dependencies. It introduces standardized component packages, distributed as NuGet packages, encompassing popular services such as Redis or Postgres.
- The framework also prioritizes user-friendly tooling experiences, encompassing project templates and command-line interface support within Visual Studio and the dotnet CLI. This simplifies the creation and interaction with .NET Aspire applications.
- Receiving substantial attention from the developer community, .NET Aspire has garnered nearly 2,000 stars on its GitHub project in just a few days since its announcement.
 Community members have expressed significant interest, particularly in relation to Project Tye and its future in the context of Aspire.
- David Fowler shared on X thread (formerly Twitter): "If you've been using Project Tye, this is the logical conclusion to that experiment we started 4 years ago (plus lots of other goodies!)."
- Emphasizing the previously mentioned components, .NET Aspire ensures a streamlined and transparent development experience. Components are mandated to meet specific criteria for usage, including providing detailed configuration, implementing health checks for monitoring remote services, offering a configurable resiliency pattern, and integrating logging and tracing.

- Each component is intricately designed to function seamlessly with .NET Aspire orchestration, capable of propagating configurations through dependencies based on .NET project and package references.
- These components are not only cloud-agnostic but also cater to Azure-specific functionalities. The initial set of components is available for exploration, complemented by additional documentation on .NET Aspire components overview on Microsoft Learn.
- The broader development landscape with .NET Aspire encompasses elements like an application model and a Developer Dashboard for comprehensive app monitoring and inspection. This includes observability, service discovery, and the deployment of a .NET Aspire application.

AUTOMATION

Zerobroker: AI Revolutionizes Logistics

Zerobroker, a logistics startup based in San Francisco, has secured \$6.5 million in seed funding to enhance its AI-driven platform designed to eliminate freight brokers from the shipping process. Notable participants in this funding round include Flexport, FundersClub, Streamlined Ventures, and other investors.

- The primary goal of Zerobroker's technology is to reduce expenses and simplify logistics for shippers. Founder and CEO Georgy Melkonyan leads the company with a mission to bring clarity and efficiency to an industry often criticized for its lack of transparency.
- Georgy Melkonyan emphasized this transparency in a conversation with VentureBeat, stating, "We bring transparency to an industry that historically has not been transparent. We show who a shipper is, who the trucker is. There is no hidden information."
- Zerobroker achieves this transparency by directly connecting shippers with carriers, thereby eliminating the traditional 20-30% commission fee charged by freight brokers on each transaction. This approach significantly reduces transportation costs for shippers.
- The platform employs artificial intelligence to automate up to 90% of repetitive tasks typically handled by logistics teams, including managing freight, paperwork, and payments. It provides real-time visibility into shipments and ensures compliance at every stage of the process.
- Georgy Melkonyan explained the platform's capabilities, stating, "With Zerobroker, shippers can create a shipment, and the system takes care of everything else – informing customers, suppliers, automating payments and paperwork. Everyone gets notified automatically."
- Since its launch in February 2022, Zerobroker has been experiencing rapid growth, adding 50% more customers each month without losing a single client. This growth underscores the increasing demand for digital innovation in the logistics sector.
- The recently secured funding will enable Zerobroker to expand its engineering team, focusing on incorporating more advanced features into the platform, such as long-term contract pricing. Additionally, the startup aims to broaden support for additional freight modes like LTL (less-than-truckload) and flatbed.

 Zerobroker's success serves as a testament to the transformative power of AI and automation in traditional industries. By eliminating intermediary brokers and optimizing workflows, data-driven platforms like Zerobroker are driving down costs and enhancing the efficiency of supply chains. As Georgy Melkonyan aptly stated, "Logistics is the backbone of any economy."

SECTION 2 – GLOBAL INFO

MIDDLE EAST

Israel-Hamas War

Hamas leader Ismail Haniyeh announced on Tuesday that a potential truce agreement with Israel is on the horizon, fuelling optimism that his militant group may soon release numerous individuals held captive since the October 7 attacks. Haniyeh conveyed this information through a statement from his office, stating, "We are close to reaching a deal on a truce."

- Throughout the ongoing conflict in Gaza, negotiators have been diligently working to finalize an agreement aimed at securing the release of approximately 240 hostages held by Palestinian militants. The majority of these hostages were taken during the recent aggressive actions by Hamas, with a significant number being Israeli civilians, including young children and elderly individuals.
- Despite a limited number of hostages being freed by Israeli ground troops or their remains being recovered, the whereabouts of the majority remain undisclosed to the public. It is widely believed that they are being held in Gaza, where Israel initiated extensive airstrikes and ground operations in response to the deadliest attack in its history.

ASTA

SOUTH KOREA

South Korean President Yoon Suk Yeol and First Lady Kim Keon Hee began a three-day trip to the UK on Tuesday, with King Charles III hosting his first state visitors since his coronation. Yoon received the full red carpet treatment, attending a state banquet at Buckingham Palace and lunching with the king and his wife, Queen Camilla.

But it was also about business, as Yoon and Prime Minister Rishi Sunak agreed on
deepening cooperation and launched negotiations on an upgraded free-trade deal. "Trade
and investment was expected to be a key focus of the visit, with... trade secretaries from
both countries preparing to sign an agreement to launch the negotiations for an upgraded
modern, world-leading Free Trade Agreement (FTA) on Wednesday," said Downing
Street.

• The UK government was keen to strike new deals with countries around the world following its departure from the European Union, particularly with fast-growing economies in the Indo-Pacific region. President Yoon addressed parliament in a visit that his office said was a "sign that London considered Seoul a key partner in global cooperation and the Indo-Pacific region."

MALDIVES

The Maldives, an Indian Ocean archipelago threatened by rising sea levels and currently facing a drinking water crisis, has taken a different approach under its new president, Mohamed Muizzu. Despite the environmental challenges, Muizzu has abandoned plans to relocate citizens and instead pledges to confront the threat by implementing ambitious land reclamation projects and constructing elevated islands.

- President Muizzu's strategy, however, has raised concerns among environmental and
 rights groups who argue that such measures may exacerbate the risks of flooding rather
 than mitigate them. The Maldives, renowned for its luxurious holiday destinations with
 white sand beaches, turquoise lagoons, and expansive coral reefs, finds itself at the
 forefront of the climate crisis, struggling for its very existence.
- Fifteen years ago, former President Mohamed Nasheed, recognizing the severity of the situation, warned citizens that they might become the world's first environmental refugees and proposed relocating to other countries such as India, Sri Lanka, or even Australia. Nasheed advocated for the Maldives to start saving funds for purchasing land in these neighbouring nations.
- In contrast, President Muizzu, aged 45, has requested \$500 million in foreign funding to safeguard vulnerable coastlines but has firmly stated that Maldivians will not be forced to abandon their homeland. The commitment to resist relocation and instead focus on engineering solutions underscores the nation's determination to face the imminent threats posed by climate change, though the potential consequences of such measures remain a point of contention among various stakeholders.

AFRICA

LIBERIA

Liberia's presidential election came to a close with political veteran Joseph Boakai emerging victorious, surpassing the incumbent George Weah, as announced by electoral authorities upon the completion of the ballot count.

- Boakai secured the presidency with 50.64 percent of the votes, while the former international football star, Weah, garnered 49.36 percent, revealed Davidetta Browne Lansanah, the president of the National Electoral Commission (NEC), during a press briefing. Boakai's triumph was by a narrow margin of 20,567 votes.
- In a remarkable display of sportsmanship, Weah had already conceded defeat on the preceding Friday evening, aligning his decision with the results from over 99.98 percent of the polling stations. This gesture earned the outgoing president and former football star commendation from international quarters on Monday, particularly for his commitment to a peaceful transition in a region historically marked by coups.

• The Economic Community of West African States (ECOWAS) released a statement praising the people of Liberia, stating, "Liberians have once again demonstrated that democracy is alive in the ECOWAS region and that change is possible through peaceful means." The acknowledgment underscored the significance of the democratic process and the peaceful transfer of power in a region where such occurrences have been less common.

SECTION 3 – MIXED BAG

HEALTH

New Obesity Medications

For much of her life, Claudia Stearns faced Thanksgiving with a sense of dread. Struggling with obesity since childhood, she loathed the yearly cycle of fixating on what she ate and the subsequent guilt of overindulging during a holiday centered around food.

- However, after shedding nearly 100 pounds through the use of medications, including Wegovy, a potent new anti-obesity drug, Stearns now describes the once constant "food noise" in her head as remarkably quiet.
- "At last year's Thanksgiving, it felt incredibly liberating to simply enjoy my meal, focus on being with friends and family, and savour the joy of the day," shares the 65-year-old resident of Somerville, Massachusetts. "It was an entirely new experience."
- As a growing number of Americans grappling with obesity gain access to a new wave of
 weight-loss drugs, Stearns' journey is becoming increasingly common. This
 transformation is particularly noticeable during times of the year when gatherings of
 loved ones and friends revolve around cooking, eating, and a sense of abundance.
 Medical experts and users alike assert that these drugs not only alter what individuals eat
 but also reshape their relationship with food.
- For some, this means gaining greater mental control over their meals. On the flip side, others argue that it diminishes the pleasure of social situations, especially during traditionally food-centric holidays like Thanksgiving, Passover, and Christmas.
- Drugs such as semaglutide in Ozempic and Wegovy, and tirzepatide in Mounjaro (recently approved as Zepbound), originally designed to treat diabetes, are now aimed at weight loss. Administered through weekly injections, these drugs operate differently than traditional diets. They mimic powerful hormones activated after eating to regulate appetite and the feeling of fullness between the gut and the brain. Studies indicate that users can shed as much as 15% to 25% of their body weight.
- Dr. Michael Schwartz, an expert in metabolism, diabetes, and obesity at the University of Washington in Seattle, explains, "That's how it works - it reduces the rewarding aspects of food."

- For Stearns, who began treatment in 2020, these weight-loss medications allow her to indulge in a few bites of her favourite Thanksgiving pies and then stop. "I would not feel full," she explains, "but I would feel satisfied."
- Yet, this shift in eating habits can have broader implications, affecting both religious and cultural practices that often revolve around food-centric festivities.
- Joe Sapone, a 64-year-old retiree from Atlantic Highlands, New Jersey, who lost about 100 pounds with dieting and Mounjaro, reflects on the change. "I'm Italian. For us, it's like going to church, going to a table. Part of succeeding at this is disconnecting a good time with what you eat," he says. "Am I still going to have fun if I don't eat that much?"
- While some users appreciate the increased control over their food choices, even during emotionally charged holiday seasons, others on these drugs lose their appetites entirely or experience side effects that undermine the pleasure of eating.
- Dr. Katherine Saunders, an obesity expert at Weill Cornell Medicine, acknowledges that
 some patients find the altered experience of food to be challenging. Yet, she emphasizes
 that most people using weight-loss medications have grappled with the physical and
 mental burdens of chronic obesity for years and are relieved to experience a decreased
 desire for food, along with shedding pounds.
- However, studies indicate that when individuals stop taking these drugs, their appetites
 return, and they regain weight, often faster than they lost it. One early analysis found that
 two-thirds of patients who started taking weight-loss drugs were no longer using them a
 year later.
- Dr. Jens Juul Holst of the University of Copenhagen, one of the researchers who first identified the gut hormone GLP-1 (glucagon-like peptide 1), which led to the development of the new class of obesity drugs, raises a philosophical question about the real-world impact of these medications.
- Speaking at an international diabetes conference, Holst critiques, "Why is it that you've lost weight? That's because you've lost your appetite. That's because you've lost the pleasure of eating and the reward of having a beautiful meal. And how long can you stand that? That is the real, real question."

AUCTION

Napoleon's Letters For Sale



A set of eleven letters written by Napoleon Bonaparte, which includes correspondences from his time at the Kremlin, has recently been put up for sale following the successful auction of the French emperor's iconic hat for an astonishing \$2.1 million. Napoleon Bonaparte (1768-1821) was emperor of France from 1804-14, and in 1815. He is regarded as one of history's greatest military leaders.

- One of the highlighted letters is dated September 18, 1812, capturing a pivotal moment during Napoleon's Russian campaign. In this dispatch, he arrives in Moscow and observes the city in flames, a result of the scorched-earth strategy implemented by the Russian forces. The French emperor eloquently describes Moscow as a spectacular city, lamenting that more than half of it has now succumbed to the ravaging fires. Priced at \$58,300, this missive also touches on the discovery of cellars filled with wine and liquor, which Napoleon deems essential for their needs.
- Napoleon's 1812 invasion of Russia marked a significant chapter in history, with the French ruler commanding the largest European military force of the time. However, this campaign resulted in the death of approximately one million soldiers and civilians.
- The president of the Raab Collection, Nathan Raab, emphasized the rarity of the letter from Moscow, describing it as extraordinary. He acknowledged Napoleon's immense admiration in American history but highlighted the nuanced perspective, stating that the emperor's legacy is not simply black or white but rather shades of gray.
- Another letter available for sale at \$79,500 details Napoleon's requisition of munitions for a final assault on Toulon in southern France. This letter sheds light on a seemingly insignificant event that altered the course of history: Napoleon's command of artillery during the assault on Toulon, a turning point in his career that ultimately led to his ascent to emperor.
- Interest in Napoleon's life has surged with the release of a biopic directed by Ridley Scott, starring Joaquin Phoenix as Napoleon. The film explores Napoleon's rise to power and his relationship with Empress Josephine, played by Vanessa Kirby. Phoenix commented on the contrast between Napoleon's desire to be heartfelt, as reflected in his letters, and the harsh reality of his responsibility for the deaths of millions.
- The auction also saw a hat belonging to Napoleon setting a new record, selling for nearly two million euros. This exceeded the previous record for a Napoleonic hat, held by the same auction house since 2014, which was purchased by a South Korean businessman for 1.88 million euros.

ENVIRONMENT

COP28 Targets Methane Emissions

Climate discussions often focus on the reduction of the most dangerous greenhouse gas, CO2. However, negotiators at the upcoming crucial COP28 meeting in Dubai are expected to also address the issue of methane emissions, another potent heat-trapping gas. Methane, while relatively short-lived in the atmosphere, is a key target for countries aiming to rapidly reduce emissions and mitigate climate change.

- The leakage of significant amounts of methane from fossil fuel infrastructure into the atmosphere underscores the urgency of addressing this issue.
- As the primary component of natural gas, atmospheric methane (CH4) is the second-largest contributor to climate change, accounting for approximately 16 percent of the warming effect. Despite its shorter atmospheric lifespan of about 10 years, methane has a much more powerful warming impact than CO2. Its warming effect is 28 times greater than CO2 over a 100-year timescale and 80 times over 20 years.
- The exact amount of methane released into the atmosphere remains uncertain, according to the International Energy Agency (IEA), although there has been progress in monitoring emissions through satellite technology. Scientists are grappling with a steady increase in methane concentrations, currently exceeding two-and-a-half times preindustrial levels.
- The majority of methane emissions, around 60 percent, are attributed to human activities, with agriculture being the largest contributor, responsible for approximately a quarter of emissions. Livestock, particularly cows and sheep during digestion, and rice cultivation contribute significantly to these emissions. The energy sector, including coal, oil, and gas, is the second-largest source of human-caused methane emissions, stemming from leaks in infrastructure like gas pipelines and deliberate releases during maintenance.
- A recent IEA report suggests that rapid cuts in methane emissions from the fossil fuel sector could prevent up to 0.1 degrees Celsius of warming by mid-century. This reduction, though seemingly modest, could have a greater impact than removing all cars and trucks worldwide from the road, according to the report.
- Repairing leaky infrastructure and eliminating routine flaring and venting during pipeline
 maintenance are identified as effective measures to reduce methane emissions. Countries
 like Norway have demonstrated that natural gas extraction and supply with minimal
 leakage are feasible. In agriculture, modifying animal diets and implementing changes to
 water management in rice fields are proposed solutions.
- A joint EU-US "Global Methane Pledge," launched in 2021 with the goal of reducing worldwide methane emissions by 30 percent by 2030 compared to 2020 levels, has garnered support from 150 countries. However, notable absences include China, India, and Russia. Experts call for increased engagement from major players and a substantial strengthening of the methane pledge at COP28, with a formalized reduction target of around 60 percent in the energy sector.
- While the United States and China have included methane in their climate action plans,
 China's plan lacks a quantified target. Oil and gas industry giants have also proposed
 commitments, such as the Oil and Gas Climate Initiative's aim for zero emissions from
 their activities by 2030. The success of global efforts to address methane emissions,
 particularly at the Dubai climate talks, is considered crucial in the ongoing fight against
 climate change.

Subscribe to Infotainment Edge Global

Infotainment Edge Global Daily Digital E-booklet is sent 5 days a week (Monday to Friday). To subscribe, please write to us at info@21stcenturyforu.com.

Copyright: INFOTAINMENT EDGETM ©2023 INFOTAINMENT EDGE GLOBAL. All rights reserved. Information appearing in INFOTAINMENT EDGE must not be reproduced in any medium without license. This edition cannot be re-transmitted to any other non-subscribing organization or individual.

Disclaimer: Your institution's rules, regulations and procedures take precedence over all information in INFOTAINMENT EDGE™ including any report, survey and research.

Career Counselling

🗱 Unlock Your Future with Expert Career Counselling! 🎇

Embark on a transformative journey with our comprehensive Career Counselling services tailored just for you! Discover your passions through Self-Exploration, laying the foundation with an Initial Assessment, and broadening your horizons with Career Counselling. Our expert counsellors guide you in Goal Setting, enhancing your employability through Skills Assessment, and provide Decision-Making Support when you need it most.

Craft your personalized Action Plan, mapping your career journey seamlessly. Worried about the future? Don't be! We offer Follow-Up and Support, ensuring you're always on the right track. Don't miss this opportunity! **Email us at info@21stcenturyforu.com** and let's shape your future together. Your dream career awaits!