

# INFOTAINMENT EDGETM

Tuesday, October 10, 2023 (Daily E-booklet on Artificial Intelligence, VR, Tech, Robotics, Coding, Global Affairs, Health, Science & Finance)

## **SECTION 1 – TECH BUZZ**

## ARTIFICIAL INTELLIGENCE



## **Entrepreneurship & AI**

In the realm of technological advancements, heeding the warnings of visionaries is crucial. Geoffrey Hinton, the mastermind behind generative artificial intelligence, has sounded the alarm about AI's potential threats to humanity, particularly the possibility of widespread unemployment due to automation.

- Recent data from Challenger, Gray & Christmas, an employment agency, paints a bleak picture, with over 20,000 layoffs in the US tech sector in just one month.
- Goldman Sachs economists go further, estimating that a staggering 300 million global jobs could be impacted by AI automation.
- The genie of AI is out of the bottle, leaving us to grapple with the pressing question of how humans and intelligent machines can coexist sustainably.
- In this rapidly evolving landscape, it becomes imperative for humans to emphasize their unique strengths their soft skills such as empathy, persuasion, and creative thinking, as well as physical tasks like farming and building.
- However, the emergence of powerful AI models like GPT-4 blurs these boundaries, making us question: what roles are exclusively human? How should we respond to the advent of generative AI?

- One domain where humans undeniably excel is entrepreneurship, a multifaceted skill
  encompassing problem-solving, organizing, and multiple specialization.
   Problematisation, the art of framing questions that inspire solutions, demands a deep
  understanding of context and creative insight.
- It's a skill honed through practice, relying on tacit knowledge that eludes the grasp of AI. Organizing, another entrepreneurial pillar, involves not just coordinating people and resources but also encompasses moral values, passion, and identity elements profoundly human and beyond AI's reach.
- Furthermore, embracing multiple specializations is vital in the AI era, demanding diverse skills and interests to navigate the evolving job market.
- Generative AI, while transformative, cannot replicate the human touch essential for entrepreneurial success. It lacks the emotional intelligence, moral judgment, and empathy that underpin human interactions.
- This inherent gap positions entrepreneurialism as a vital survival skill in the face of AI's ascent. To thrive in this new reality, individuals must acquire a range of specialized skills and collaborate closely with AI systems.
- The education system may need to adapt, emphasizing skills over traditional subjects. Entrepreneurship, once confined to business schools, could become a mandatory discipline, recognizing its fundamental role in the future workforce.
- We're witnessing a paradigm shift akin to the evolution from calculators to Google AI is reshaping our understanding of the world. While AI renders some cognitive tasks obsolete, the entrepreneurial method remains an indomitable aspect of human intelligence. It is a beacon of hope amid the AI-driven crisis, reminding us of our resilience and adaptability. As AI extends its influence, entrepreneurialism stands as a testament to the enduring power of human creativity, ingenuity, and determination.

## Microsoft to debut its first AI chip next month

Microsoft is poised to reveal its inaugural artificial intelligence (AI) chip next month, as reported by tech outlet The Information. This strategic move aims to lessen Microsoft's dependency on Nvidia's graphics processing unit (GPU) chips, which are currently in high demand and short supply.

- The AI chip, codenamed Athena, is specifically engineered for data center servers and is anticipated to rival Nvidia's leading H100 GPU. Currently, Microsoft and other cloud providers employ these GPUs to power extensive language models (LLMs) and various AI applications.
- The existence of Athena first surfaced in an April report by The Information. Its official unveiling is slated for Microsoft's Ignite conference, scheduled from November 14-17.
- This initiative aligns with the escalating demand for AI chips, especially for training and operating resource-intensive LLMs. The scarcity of AI chips has led to increased prices in the market.
- In a parallel development, Microsoft-backed OpenAI is exploring the prospect of creating its own AI chips. By pursuing this avenue, OpenAI aims to diminish reliance on Nvidia and other chip manufacturers. This shift could enable Microsoft to curtail expenses and

enhance the efficiency of its cloud services. Notably, industry giants like Google and Amazon are also venturing into AI chip development, indicating a significant surge in the AI chip market.

#### **AI-Powered Skills Revolution**

360Learning, a global collaborative learning SaaS leader, has recently made a strategic move towards enhancing its AI capabilities and addressing the crucial issue of skills gaps within organizations. The company has successfully acquired eLamp, a pioneering AI-powered skills management platform, signalling a significant step in 360Learning's mission to become the primary learning platform for global businesses seeking to reskill and upskill their workforce.

- Skills gaps have emerged as a major obstacle hindering the growth of businesses of all sizes, preventing them from staying competitive in the face of evolving challenges.
   According to a report by the World Economic Forum, it is predicted that 50% of employees will require new skills by 2025. Additionally, the retirement of older generations possessing essential skills further exacerbates this challenge, leaving HR teams with the expensive task of filling these gaps.
- eLamp, founded in 2015, has been a trailblazer in the realm of AI-powered skills management, catering to highly technical industries such as construction, engineering, and nuclear sectors. By utilizing AI technology, eLamp has transformed skills management in companies, prompting 360Learning's interest in integrating their expertise.
- Traditionally, identifying knowledge gaps within organizations involved time-consuming and costly manual processes, often resulting in outdated information. With the power of AI, this process becomes faster and more effective. By leveraging eLamp's technology, 360Learning aims to revolutionize skills-based learning within organizations, offering seamless solutions for upskilling (equipping employees with the necessary skills for their current or future roles) and reskilling (preparing employees for transitions to different career paths due to changes in company strategy).
- The integration of eLamp's technology into the 360Learning platform will enable
  companies to deliver targeted skills-based learning to employees precisely when needed.
  By connecting skills-based learning to the company's skills strategy, HR and L&D teams
  can proactively address emerging skill gaps, ensuring the workforce remains relevant and
  adaptable.
- 360Learning has a rich history of utilizing technology to facilitate collaborative learning and empower teams to upskill internally. With the addition of eLamp's AI capabilities, the platform will now be able to identify skills gaps and connect employees with internal experts proficient in those skills. This synergy between collaborative learning and AI will enable L&D teams to identify content gaps and leverage internal experts to fill these gaps effectively.
- Nick Hernandez, co-founder and CEO of 360Learning, expressed enthusiasm about the acquisition, highlighting the transformative potential of AI in mapping employee skills dynamically and in real time. Olivier Rohou, co-founder and CEO of eLamp, shared the

- excitement, emphasizing the value of this partnership in creating a truly skills-based organization.
- Valerie Guyot, VP People EMEA at Arkance (Groupe Monnoyeur), a joint customer of 360Learning and eLamp, praised the partnership, anticipating the significant impact it will have on their employees' career growth and internal mobility.
- 360Learning, founded in 2013, continues to empower companies to upskill their workforce internally, thereby addressing the talent shortage. Through their comprehensive learning platform, they facilitate seamless onboarding, upskilling, and training for employees, customer-facing teams, as well as partners. With a workforce of over 400 team members across the US and EMEA, 360Learning is at the forefront of shaping the future of work for more than 1,700 organizations.

## Jumio's AI-powered verification to combat online fraud

Jumio, a prominent provider of comprehensive identity verification, risk assessment, and compliance solutions, has taken a significant step forward in its mission to combat online fraud and financial crime. The company has expanded its strategic partnership with NextWealth, a leading data services provider specializing in AI and machine learning technologies.

- Jumio's cutting-edge AI-powered solutions have achieved remarkable levels of automation and quality. Through this extended collaboration, NextWealth will continue to offer identity verification services for Jumio. This partnership ensures uninterrupted innovation for Jumio, allowing it to enhance its services further. For Jumio's clients, this collaboration guarantees global support and scalability while maintaining consistent service levels.
- NextWealth will play a crucial role by managing back-office operations for Jumio, ensuring seamless business continuity. Leveraging their expertise in recruiting and retaining top talent at scale, coupled with their world-class execution, NextWealth empowers Jumio to expand its operations securely.
- Stuart Wells, Jumio's CTO, emphasized the importance of innovative fraud prevention solutions in today's digital landscape: "Jumio's mission to make the internet a safer place relies on the ongoing development of innovative fraud prevention solutions to thwart cybercriminals and their increasingly sophisticated tactics." This partnership enables Jumio to focus on its core business and technology objectives while providing unparalleled support to its global customers.
- Mythily Ramesh, CEO of NextWealth, expressed excitement about the collaboration, stating, "We are excited to continue expanding our partnership and supporting Jumio in its growth journey.
- The partnership between NextWealth and Jumio will further cement our position as one of the largest AI-ML-driven data services players in the country." NextWealth's digital solutions will ensure international quality for Jumio's services, offering flexibility to manage business fluctuations in a secure environment. This commitment guarantees Jumio's customers a seamless experience coupled with enhanced security and trust.
- Jumio is dedicated to helping organizations know and trust their customers online. Utilizing advanced technologies such as automation, biometrics, AI-machine learning,

- liveness detection, and no-code orchestration, the Jumio KYX Platform offers sophisticated identity proofing, risk signals, and compliance solutions.
- These solutions assist businesses in accurately establishing, maintaining, and reasserting trust throughout the customer journey. Jumio has processed over 1 billion transactions across 200 countries and territories, spanning real-time web and mobile transactions.
- Headquartered in Sunnyvale, Jumio operates globally, with offices in North America, Latin America, Europe, Asia Pacific, and the Middle East. The company has received numerous awards for its innovative approach and is backed by Centana Growth Partners, Great Hill Partners, and Millennium Technology Value Partners.

## **CODING**

## **Easy Programming Languages**

Embarking on the journey of programming can be daunting for newcomers, but fear not – the choice of the right programming language can significantly ease this transition. If you're a beginner eager to dive into the coding world, you're in luck. This article explores five beginner-friendly programming languages that pave the way for novice programmers.

- **Python**: Python consistently stands out as one of the most beginner-friendly programming languages. Its simplicity and readability, akin to the English language, make it an excellent starting point for coding novices. Python's versatility shines through as it finds applications in diverse fields such as web development, data analysis, and machine learning.
- **JavaScript**: For aspiring web developers, JavaScript is a must-learn language. Renowned for its flexibility, it is primarily used to create interactive websites. The language boasts an extensive community and abundant online resources, ensuring ample support for learners. Moreover, JavaScript holds the unique distinction of being universally supported by all web browsers.
- **Ruby**: Ruby is celebrated for its elegant and easy-to-read code. Its welcoming community makes it an attractive option for beginners. Ruby on Rails, a popular web framework built with Ruby, simplifies web development, making it accessible for creating web applications. Ruby's syntax minimizes confusion, making it an ideal language for programming newcomers.
- Scratch: Ideal for young learners and those inclined towards visual and interactive learning, Scratch offers a unique approach to programming. Developed by MIT, Scratch utilizes a block-based system, allowing users to fit together code blocks like puzzle pieces. This approach enables teaching fundamental programming concepts without delving into complex syntax.
- **Swift**: For those interested in iOS app development, Swift proves to be a beginner-friendly choice. Developed by Apple, Swift was designed for clarity and conciseness. It serves as an improvement over its predecessor, Objective-C, in terms of both

- performance and simplicity. Learning Swift opens doors to developing applications for iPhones and iPads.
- In conclusion, these five programming languages Python, JavaScript, Ruby, Scratch, and Swift offer excellent starting points for beginners. Choose the language that aligns with your interests and aspirations, and remember to enjoy the learning process. With dedication and practice, you'll soon find yourself comfortable and confident in the world of coding.

## **TECHNOLOGY**

## **Lead-Free Radio Frequency**

HUBER+SUHNER, a leading player in the electronic connectivity sector, has taken a significant step towards environmental responsibility by introducing a lead-free solution for its radio frequency (RF) SMA connectors.

- This move makes HUBER+SUHNER one of the pioneers in providing eco-friendly alternatives in the industry. These innovative connectors, which maintain the same high levels of electrical performance as traditional counterparts, are readily available for purchase through the company's distributor network.
- Having garnered decades of expertise in connectivity solutions, HUBER+SUHNER is renowned for its SMA interface, which finds applications in diverse sectors including Communication, Defense, Aviation, Test and Measurement, and various industrial fields.
- The company's engineers have successfully developed a lead-free connector solution that matches the electrical performance of conventional connectors. Furthermore, the mechanical properties, such as mating forces, remain consistently high, ensuring the reliability of these connectors.
- They offer a broadband frequency range of up to 18 GHz, exceptional return loss, and robust mechanical strength. Additionally, they are inter-mateable with PC3.5 and SK connectors.
- Lead, a component often added to alloys to enhance machinability, poses significant health and environmental risks if not properly managed. European regulations, including the EU's RoHS Directive (2011-65-EU) and the EU REACH (EC) No. 1907-2006, have placed restrictions on lead usage due to its hazardous nature.
- HUBER+SUHNER's lead-free SMA connectors comply with these regulations, reflecting the company's commitment to staying ahead of evolving legislation and ensuring the well-being of its workforce, customers, and the environment.
- By offering this lead-free solution, HUBER+SUHNER reaffirms its position as a reliable technology partner, providing sustainable options to industries that demand high performance, availability, and long-term functionality from their products. For more details about HUBER+SUHNER's lead-free SMA interface, interested parties can visit the company's website.

- HUBER+SUHNER Group, a globally active Swiss company, specializes in developing and manufacturing components and system solutions for electrical and optical connectivity.
- Their products cater to the Industry, Communication, and Transportation sectors, utilizing technologies like radio frequency, fiber optics, and low frequency.
- HUBER+SUHNER products are recognized for their outstanding performance, quality, reliability, and long service lives, even under challenging conditions.
- With a widespread production network and a presence in over 80 countries through subsidiaries and representatives, the company ensures proximity to its customers on a global scale.

## **ROBOTICS**

## China-made robotic vehicle explores underside of Arctic ice

A Chinese university research team has achieved a significant milestone in Arctic exploration with their autonomous underwater vehicle (AUV) named "XH1000." Developed by scientists from Harbin Engineering University, this fish-shaped robot successfully gathered extensive data during China's 13th Arctic Ocean scientific expedition, shedding light on diverse features beneath the North Pole.

- The expedition, which concluded in late September, saw the XH1000 conducting underice environment detection operations near the Chukchi Sea. Equipped with domestically developed detection sonars, this polar-observing AUV covered an impressive area of 7,000 square meters beneath the Arctic ice. The robot relayed a wealth of data, including crucial information on ocean water temperature, salinity, and pH levels.
- Zhu Zhongben, the leader of the operation team and an associate professor at the university, emphasized the significance of the data collected. He explained that this information is instrumental in enhancing scientists' comprehension of the sea-ice changing process and ocean currents in the region. Moreover, it provides essential data support for China to effectively address the challenges posed by global climate change.
- Zhu highlighted the successful verification of various technologies during the expedition. These included underwater navigation at high latitudes in the polar region, a crucial aspect for scientific research. Additionally, the mission provided invaluable experience for robotic submersibles to operate in high-risk polar areas and withstand extreme harsh environments.
- The Chinese scientists embarked on their 13th Arctic Ocean scientific expedition on July 12 aboard the polar icebreaker Xuelong 2. Covering an impressive 15,000 nautical miles, they successfully reached the North Pole on September 5 before returning to Shanghai on September 27. Notably, this achievement filled a crucial gap in China's scientific research concerning the polar regions, marking a significant milestone in the country's exploration efforts.

## SECTION 2 – GLOBAL AFFAIRS EUROPE

#### LUXEMBOURG

Luxembourg's political landscape experienced a significant shift as the coalition government led by Prime Minister Xavier Bettel faced a major setback in the recent general election. The Green party, a key member of the coalition, suffered a significant defeat, leading to the loss of the government's parliamentary majority.

- With the Greens performing poorly in the election, the path has now been cleared for the
  conservative Christian Social People's Party (CSV), which emerged as the largest single
  party with 29 percent of the vote, a slight increase from the 2018 elections. The complete
  results, revealed on Sunday evening, confirmed CSV's lead in this small and prosperous
  European Union state.
- The three-party coalition, comprising Liberals, Socialists, and Greens, which had been led by the 50-year-old Bettel since 2013, is now unable to maintain its position. Despite a slight increase in the Liberal party's vote share to 18.7 percent, the Greens experienced a significant decline, dropping by almost seven percentage points to 8.5 percent.
- In total, the coalition alliance lost two seats, reducing their representation in the 60-seat Chamber of Deputies to just 29 seats, which is less than half of the total seats available. This outcome marks a notable shift in Luxembourg's political landscape, creating uncertainty about the future direction of the country's government.

#### MIDDLE EAST

#### Israel-Hamas WAR

Oil prices surged on Monday as geopolitical tensions escalated in the Middle East following a surprise attack by Hamas on Israel over the weekend. This unexpected event raised concerns about the stability of crude oil supplies from the region, especially amid existing worries due to output cuts by major oil-producing countries like Saudi Arabia and Russia.

- The crisis deepened anxieties about inflation, as energy costs play a significant role in driving up prices. This development posed a new challenge for central banks, forcing them to reconsider their strategies for interest rate hikes in order to prevent economic downturns.
- In response to the attack, Israel declared war, resulting in a tragic loss of more than 1,000 lives. This escalation sparked fears of a wider conflict that could potentially involve the United States and Iran. Market analysts, including ANZ Group's Brian Martin and Daniel Hynes, emphasized the pivotal question for investors: whether the conflict would remain localized or expand to affect other regions, notably Saudi Arabia.
- Initially, there was a cautious assumption in the markets that the situation might remain limited in scope and duration, with predictable consequences for oil prices. However, the

prevailing sentiment was marked by increased volatility, as uncertainties loomed over the potential for further escalation and its impact on global oil markets.

#### **NORTH AMERICA**

#### **UNITED STATES**

US Senate Majority Leader Chuck Schumer and his accompanying delegation engaged in diplomatic discussions with Chinese Foreign Minister Wang Yi on Monday, as captured in footage from the agency pool.

- Warmly welcomed at Beijing's Diaoyutai State Guesthouse, Wang greeted Schumer and the delegation, setting the tone for their meeting.
- In his opening statements, Wang expressed his hope that the visit would facilitate a more nuanced understanding of China for the United States.
- He emphasized the importance of managing existing differences between the two nations in a rational manner, ultimately aiming to guide their relationship back to a path of healthy development.
- Schumer reciprocated the hospitality, expressing gratitude to Wang for the warm reception. He underscored the importance of open and honest communication by leading a bipartisan delegation, showcasing their willingness to engage in constructive dialogue.

#### **AFRICA**

#### **Morocco Meet**

The IMF and World Bank gathered in Morocco on Monday for their first annual meetings on African soil in 50 years, under pressure to reform to better aid poor nations blighted by debt and climate change.

- The International Monetary Fund and World Bank traditionally held their annual gathering of finance ministers and central bank governors outside their Washington headquarters every three years. The southern Moroccan city of Marrakesh was supposed to host it in 2021, but the gathering was postponed twice because of the Covid pandemic.
- A powerful earthquake killed nearly 3,000 people in the region south of Marrakesh last month and threatened to derail the event again, but the government decided it could go ahead.
- The IMF and World Bank last held their meetings in Africa in 1973 when Kenya hosted the event and some nations were still under colonial rule. Half a century later, the continent faced an array of challenges ranging from conflict to a series of military coups to unrelenting poverty to natural disasters.

## **SECTION 3 – MIXED BAG**

#### HEALTH

#### **Trivalent MMS Vaccine Offers Broad Protection**

In a recent study reported in the journal PNAS, scientists have developed a groundbreaking intranasal vaccine known as MMS, incorporating measles-mumps-SARS-CoV-2 spike (S) protein, which demonstrates robust and lasting protection against major variants of the Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2). This vaccine builds upon the proven safety of the measles-mumps-rubella (MMR) vaccine platform.

- **Background**: The global COVID-19 pandemic, caused by SARS-CoV-2, has resulted in significant morbidity and mortality worldwide, with over 6.96 million deaths and 771 million infections reported as of October 2023. Existing vaccines, utilizing the spike protein as an immunogen, have limitations such as reduced efficacy against evolving SARS-CoV-2 variants, short-lived immunity, and lack of mucosal defence. The emergence of variants, particularly Omicron with its multiple mutations, poses challenges to current vaccines. Consequently, there is an urgent need for more effective vaccines that offer broader mucosal immunity and can adapt to evolving strains.
- About the Study: Researchers conducted a comprehensive analysis, developing modified
  measles and mumps viruses expressing the SARS-CoV-2 six prolines (preS-6P) proteins.
  Various assays, including virus tests and molecular analyses, were performed. Animal
  studies, involving immunization and challenge experiments, were carried out with the
  approval of The Ohio State University's Institutional Laboratory Animal Care and Use
  Committee.
- **Study Results**: The study revealed that the preS stabilized with preS-6P induced a superior neutralizing antibody response. Modified strains, incorporating genes from Delta and Omicron variants, were developed. A trivalent vaccine derived from these strains demonstrated a broader immune response, generating neutralizing antibodies against multiple SARS-CoV-2 variants. This trivalent version maintained antibody responses for four months, stimulating tissue-resident memory T cell responses in the lungs, crucial for SARS-CoV-2 defense. Notably, the trivalent vaccine showed enhanced T-cell responses and broader neutralizing activity against various SARS-CoV-2 variants, especially the Delta and Omicron BA.1 strains, compared to its monovalent counterpart.
- Intriguingly, the method of vaccine administration played a vital role. Intranasal delivery not only provided complete SARS-CoV-2 protection but also triggered potent systemic and mucosal immune responses. This suggests that intranasal immunization might offer superior protection against respiratory viruses like SARS-CoV-2.
- Conclusions: In summary, researchers have developed an intranasal trivalent MMS vaccine offering robust protection against measles, mumps, and various SARS-CoV-2 variants. This modified MMR vaccine version exhibits broad neutralizing capabilities, making it a promising tool against evolving SARS-CoV-2 variants. Importantly, its design allows for easy modifications to address emerging variants. This next-generation

vaccine candidate presents durable and comprehensive protection, making it a significant asset in the fight against SARS-CoV-2 variants.

#### **SPACE**

#### **India's Solar Mission Success**

India's maiden solar mission, the Aditya-L1 spacecraft, achieved a significant milestone by executing a 16-second trajectory correction maneuver (TCM), as reported by the Indian Space Research Organization (ISRO). This maneuver, which followed the Trans-Lagrangean Point 1 Insertion (TLII) maneuver performed on September 19, was essential in ensuring the spacecraft stayed on its intended path towards a Halo orbit insertion around L1. ISRO confirmed the spacecraft's health and its steady progress toward the designated destination.

- During its journey, Aditya-L1 underwent four earth-bound manoeuvres and the
  successful TLII manoeuvre, breaking free from Earth's gravitational pull. Moreover, it
  has commenced the collection of crucial scientific data, particularly from the STEPS
  (Supra Thermal and Energetic Particle Spectrometer) instrument, which measures suprathermal and energetic ions and electrons over a distance of 50,000 km from Earth. This
  data holds immense value in analyzing particle behaviour around our planet.
- Aditya-L1's mission commenced after the successful soft landing of Chandrayaan-3 near
  the Moon's South pole. Launched from the Satish Dhawan Space Centre on September 2,
  the spacecraft carries seven payloads designed for an in-depth study of the Sun. Among
  these payloads, four are dedicated to observing solar light, while the remaining three
  measure plasma and magnetic fields in-situ.
- The spacecraft is destined to be placed in a halo orbit around Lagrangian Point 1 (L1), situated 1.5 million km from Earth in the direction of the Sun. This journey is anticipated to span four months. Positioned at approximately 1% of the Earth-Sun distance, Aditya-L1 will focus on studying the Sun's outer atmosphere, marking a crucial scientific endeavour.
- The strategic positioning at L1 offers a unique advantage—continuous solar observation without interruptions caused by eclipses or occultation. This uninterrupted observation facilitates real-time studies of solar activities and their impact on space weather. The data gathered by Aditya-L1 will play a pivotal role in enhancing our understanding of the sequence of events leading to solar eruptions, contributing significantly to a deeper comprehension of space weather drivers.

#### INTERNET

## **Amazon Launches Space Internet**

Amazon successfully launched two satellites as a significant step towards its ambitious plan to deliver internet services from space, intensifying its competition with Elon Musk's Starlink service. The launch took place from Cape Canaveral in Florida, facilitated by the United Launch Alliance (ULA), a joint venture between Boeing and Lockheed Martin.

• Amazon's venture, known as Project Kuiper, aims to provide "fast, affordable broadband to unserved and underserved communities worldwide" by deploying a constellation of

- over 3,200 satellites in low Earth orbit (LEO). Rajeev Badyal, Project Kuiper's vice president of technology, emphasized the company's confidence in their satellite design, though acknowledging the importance of on-orbit testing.
- To support Project Kuiper, Amazon plans to invest \$10 billion in the project and has already scheduled 77 heavy-lift launches with commercial providers such as Arianespace, ULA, and Bezos-owned Blue Origin. The first operational satellites of Project Kuiper are set to be launched in early 2024, with initial tests involving customers expected at the end of the following year.
- The recent test aimed to establish communication between the satellites and Earth, deploy their solar panels, and ensure proper functioning of all instruments at desired temperatures. Upon completion of the test mission, the prototypes will be safely removed from orbit and disintegrated in Earth's atmosphere.
- Project Kuiper's primary objective is to provide internet access to remote and
  underserved regions globally, including war zones and disaster-stricken areas. This
  initiative aligns with similar efforts by SpaceX's Starlink, which initiated its project in
  2019 with over 3,700 operational satellites. However, SpaceX's ownership of Starlink
  sparked controversy in Ukraine after it was revealed that the service was denied during a
  planned attack by Kyiv forces on Russia's Black Sea navy fleet.
- OneWeb, headquartered in London, has also entered the emerging sector, reflecting the
  strategic importance of space-based internet services. Several governments, including
  China, Canada, the European Union, and the United States military's Space Development
  Agency, have outlined plans to launch their satellite constellations, further intensifying
  the race in this rapidly evolving space industry.

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