Department of Computer Applications(MCA)

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Technical Newsletter

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Alumni Section

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Chetu
World-Class Software Solutions

How is Salesforce leading?

Force.com provides Software as a Service (SAAS) product that is Salesforce. It has the best, adaptable and most innovative attributes/factors to supervise the various marketing activities such as presales, sales and after sales.

Conventional features of Salesforce are adaptable, restructuring, revolutionizing and robotic/ automated. These cardinal and salient features make the administration and handling of pivotal data effective. This data administration is called governance of lead, account, contracts and management of sales pipelines and predicting in the tracking, customer support management. Salesforce made reporting, examination and analytics very easy by their aristocratic and dynamic reporting dashboards where complete data is obtainable and within easy reach in one place.

This product from Force.com offers liberty to develop your personal system with your personal requirements, configuration and contours thus no limitation of resembling standard CRM functionality. It provides the ability to a non-coder to develop their own applications and platforms like stockroom management system, business platforms, expenditure and payroll management etc.

What is Commerce Cloud?

Salesforce Commerce cloud is preeminent software as a service platform for e-commerce. Commercial enterprises and retailers are providing unparalleled online shopping experience to their customers by using this pioneering platform from Salesforce.

The organizations are able to provide the panorama of the order to customers in the complete buying journey very easily with the help of Commerce cloud. They are able to provide this transparency across all the platforms such as social, web, store or mobile channel. Commerce cloud provides organizations a powerful control over the catalog which allows them to productively launch new products or brands. Organizations are able to take care of leads, initiate and drive conversations, can easily spread reach and persuade loyal brand campaigners.

With Salesforce Commerce Cloud, any association can shape their future investments plans and strategies with the help of planning tools. Launching, marketing and operating any online store efficiently becomes an easy task with commerce cloud tools. This list of top-of the line features moves forward with a few other very useful and prominent features such as Content management, customer service management, order accomplishment and customized personal shopping.

Commerce cloud plays a prominent role in two types of businesses, those are B2B and B2C. B2B stands for business-to-business while B2C stands for business-to-customers. B2B is a procedure of offering product and services for different organizations while B2C is a procedure of offering product and services to customers. Organizations connect with supreme customers rapidly and effectively. Potential customers/buyers of these brands and organizations experience unparalleled personalized experience because of the commerce cloud.

Commerce cloud admixtures the ingenious designs with artificial intelligence. It also accommodates flawless multichannel integrations which accelerate the process of procurement. These straightforward technologies help brands to be successful, incorporate intelligent systems to trace the pattern in complex buying behavior of consumers and customers. Organizations should avoid very complex multi-channel buying processes to attract more customers.

What is Experience Cloud?

Salesforce Experience cloud is preeminent software as a service platform by which one can develop a branded digital experience to split, share, cooperate and interact with customers, partners, employees and people which are prime chief for the business. Experience cloud helps in building digital experience platforms. Customers and Partners can host marketing and corporate sites on these platforms , also partner portals, support forums web applications and more can be hosted.

Experience cloud elongates and stretches the power of CRM data so they can supervise channel accounts and amplify products with the marketing campaigns. Companies can oversee the inventory and make purchases. Various layers are composed and function together to build a Experience cloud site. Every layer contains a certain fixed set of content and data. A lot of prebuilt templates are also available to start.

Experience cloud can help in creating a self-service for customers where they can help each other among themselves. There is already a Customer Service template present which can be used in developing such a service. This will also increase customer engagement and participation.

Experience cloud can help in creating portals where customers can initiate insurance claims, examine healthcare data, schedule appointments, and help forum, support community or something else. It even helps in creating multiple sites within organizations for different impetus.

For more, Experience cloud sites can be used to:-
- Connect employees with distributors, suppliers to enhance sales and production
- Promote upcoming events and workflows using social listening, content and engagement
- Create one place portal to keep FAQs and answer new queries of customers which can be helpful for other customers
- Process warranties and self-service claims on vehicles
  Why should Experience Cloud be used with Commerce Cloud?

Customer relationship management (CRM) is a platform where an organization can organize and track the communications with its customers. These can be current customers or future customers.

Organizations can use technology to collocate, program and put in sync the sales of the products, branding and marketing of the products , provide customer service and support to the customers in real time very easily, efficiently and effectively.

Provide Supremacy using Commerce Cloud with Experience Cloud-

Commerce cloud is a customer-centric solution by Salesforce for providing end-to-end experience of buying to ecommerce customers. Organizations have the ability to enhance the overall experience of their customers which will eventually lead to organization's success. Organizations can develop the platform by integrating data to artificial intelligence, cutting-edge software and other assets to improve user-experience.

B2B and B2C organizations use Commerce cloud to escalate user experience and put customers first. Experience cloud can help organizations to improve e-commerce solutions for customers in several ways such as:-

- **Entitle Customer to Perceive, Research, Participate and Collaborate about your products :**
  By extending commerce cloud with Experience cloud, customers will get the whole new purchasing experience. Incorporating the website with digital experience enhances and enables the customer to browse, study and procure products all in one place.
- **Provide online Self-Service to customer with Experience Cloud :**
  Online self-service experience will result in positive experiences for customers which will head to higher conversion rates and lesser rejected carts. Employee forum and discussion forums to stimulate and motivate customers to communicate with one another, exchange product feedback and engage new customers.

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Microsoft, OpenAI plan $100 billion supercomputer called 'Stargate': Report
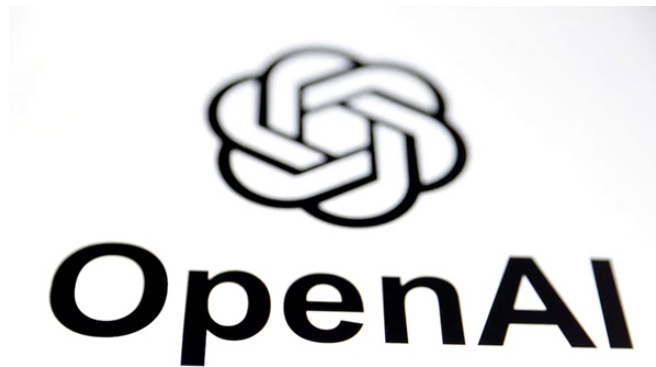
Highlights
- *Microsoft, OpenAI plan $100 billion data-center project, media report says*
- *OpenAI unveils voice cloning tool Voice Engine: All you need to know*
- *Microsoft and OpenAI plan to invest $100 billion for Stargate AI(Artificial Intelligence) supercomputer: Report*

Microsoft and OpenAI are working together on building an artificial intelligence supercomputer called "Stargate" that could cost as much as $100 billion, according to a report by *The Information* on Friday. The publication reported the tentative cost of $100 billion, citing a person who spoke to Sam Altman about it and a person who has viewed some initial cost estimates. It also seems likely that Microsoft would finance the project that could cost more than 100 times more than some of the biggest data and would only come around by the year 2028. The report says that Stargate will be the biggest in a series of supercomputers that Microsoft and OpenAI plan to build over the next six years. The supercomputer plan is currently in the middle of the third phase with Stargate being part of the fifth and final phase. A significant part of the cost for the upcoming phases will come from acquiring AI chips, according to the report.

Here is the Youtube Video link: https://www.youtube.com/watch?v=SPCGY0xJVtI

There is still a bit of a bottleneck in the AI development process — the shortage of GPUs (graphics processing units), which are used to crunch data for AI models. The generative AI boom caused the demand for these chips to skyrocket. On top of that, one manufacturer, Nvidia, almost has a monopoly on the market because it produces some of the most capable chips for AI. And it is struggling to deliver orders with ever-increasing demand. And its chips are only getting more expensive.

Nvidia CEO (Chief Executive Officer) Jensen Huang, right after the company's GTC (GPU Technology Conference) 2024 event, confirmed that the company's latest AI chip called Blackwell B200 will cost anywhere between $30,000 and $40,000 per unit. The company has spent over $10 billion on research and development of the chip that outperforms all others on the market by a huge margin.

But now, a host of technology companies including Intel, Qualcomm, Google Cloud, Arm and Samsung have come together to create the "United Acceleration Foundation," an open standard accelerator programming model that aims to challenge Nvidia's software and hardware dominance in AI. The project could cost as much as $100 billion, a report from The Information said.

Microsoft will be responsible for financing the project that executives envisage will bring to life the proposed U.S.-based supercomputer, which they refer to as Stargate. Currently, Nvidia is one of the largest suppliers of high-end chips, and is struggling to keep up with ever-increasing demand.

Prices of AI chips have also increased with 'Nvidia's latest release, the Blackwell B200 costing anywhere between $30,000-40,000. The Stargate supercomputer will be the fifth phase of a series of supercomputers. The fourth-phase supercomputer for OpenAI is expected to be launched around 2026. The high cost of building the supercomputer is being attributed to bottlenecks in the supply of high performance GPUs used for the development of AI models.

Artifact, the AI powered news app, isn't dead after all
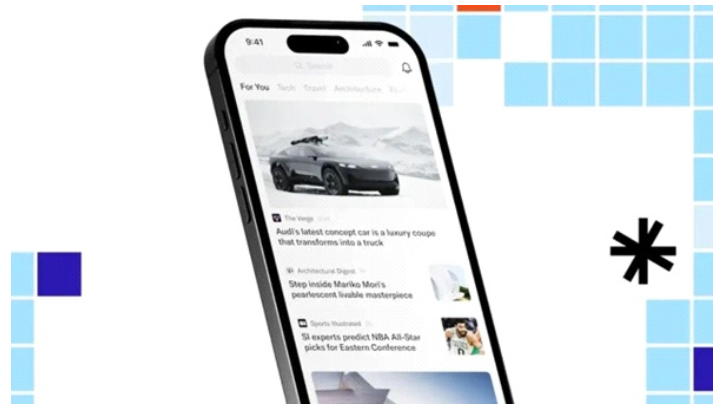
Highlights

- *Artifact, the AI powered news app, isn't dead after all*
- *The Artifact news app isn't dead yet*
- *Instagram co-founders' AI-powered news app Artifact may not be shutting down after all*

Artifact , an AI-powered news aggregation app is here to stay, at least for a while. Developed by Instagram co-founders Kevin Systrom and Mike Krieger, the creators had announced earlier that they were closing shop because "the market opportunity isn't big enough to warrant continued investment in this way."

In a blog post, the developers had said that that they would be slowly winding down operation in February, but the app seems to be working to date. According to a recent report by *TechCrunch,* Systrom said he was working with Krieger and that they haven't given up on the plan to maintain the app in the future and will try to keep the service alive.

The report also suggests that Systrom and Kriger are currently the only people running Artifact and it will likely shut down sometime later. Unlike other apps, Artifact had been funded by the founders themselves, and it looks like they still have the money to continue running the app, at least for now.

Here is the Youtube Video link: https://www.youtube.com/shorts/qV0ni6-owJw

Launched in February 2023, Artifact delivers AI-powered personalised news curations based on user behaviour. The app eventually rolled out several new features like AI-powered article summaries, comments, a Twitter-like posting feature and marking articles as clickbait. However, the app has lost some of these since they required extensive moderation, which was more than what the eight-person team at Artifact could handle.
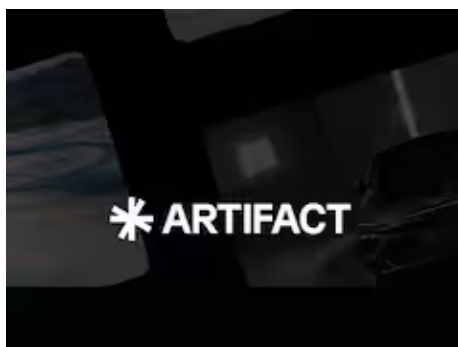
Cisco alerts users to password-spraying attacks targeting VPN

Highlights

- *Cisco warns of ongoing password-spraying attack on its business VPN services.*
- *Targeted service: Remote Access VPN (RAVPN) on Cisco Secure Firewall.*
- *Research suggests attack linked to botnet named Brutus, possibly tied to Russian state-sponsored group APT29 (advanced persistent threat).*

Networking giant Cisco has warned its users of an ongoing attack against its business VPN services.In a security advisory, Cisco said it had been notified of an ongoing password-spraying attack against different third-party VPN concentrators. In this instance, it was Remote Access VPN (RAVPN) services configured on Cisco Secure Firewall that were affected.

Russian attackers

"Depending on your environment, the attacks can cause accounts to be locked, resulting in Denial of Service (DoS)-like conditions," Cisco explained, saying that the activity appears to be a reconnaissance effort. The threat actors were not named.Password spraying is a type of attack in which the threat actor tries the same password with multiple accounts, until one combination works.

Listing its set of defenses and mitigations, Cisco recommended enabling logging to a remote syslog server for improved correlation and auditing of network and security incidents across various network devices; securing default remote access VPN profiles by pointing unused default connection profiles to sinkhole AAA (Authentication, Authorization, and Accounting) servers; leveraging TCP (Transmission Control Protocol) shun to manually bloc dangerous IP addresses, configuring control-place ACLs (Access Control Lists) to block unauthorized public IP addresses from running VPN sessions; and using certificate-based authentication for RAVPN.Security researcher Aaron Martin claims the attack was likely the work of an undocumented malware botnet named Brutus.

He made the connection after observing the malware's targeting scope and attack patterns, it was said. In his analysis of the botnet, Martin said it counts some 20,000 IP (Internet Protocol) addresses worldwide. At first, the attacks targeted SSL (Secured Shell) VPN appliances from Fortinet, Palo Alto, SonicWall, and Cisco, but have since evolved to include web apps using Active Directory for authentication, too.

To avoid raising any flags, Brutus rotates its IPs every six attempts. Although inconclusive, some evidence points to Brutus being the work of APT29, an infamous Russian state-sponsored threat actor.

Thousands of online systems could be victim of dangerous new DoS attack

Highlights

- *UDP (User Datagram Protocol) flaw (CVE-2024-2169) triggers "Loop DoS," flooding networks with infinite traffic.*
- *Vulnerability spans protocols like DNS (Domain Name System), NTP (Network Time Protocol), enabling IP spoofing and unverified traffic.*

Hackers can render network services completely useless, by putting them in an infinite communications loop. The loop generates large volumes of traffic, which is why the attack is being dubbed "Loop DoS".

This looped denial-of-service attack was discovered by cybersecurity researchers at the CISPA (Cyber Intelligence Sharing and Protection Act) Helmholtz-Center for Information Security, BleepingComputer reports. It abuses a vulnerability in the User Datagram Protocol (UDP), which allows for IP spoofing and doesn't properly verifies traffic packets.

The vulnerability is tracked as CVE-2024-2169 (common vulnerabilities and exposures), and by exploiting it, the researchers put the vulnerable endpoints into an endless loop of traffic generation. As a result, the target systems were unable to service legitimate requests. All it takes is a single host sending one message that starts the communications loop.

Endless loop DoS

Researchers from the Carnegie Mellon CERT Coordination Center (CERT/CC) hint that the vulnerability is relatively dangerous, as it allows threat actors to turn a service unusable, or even worse - cause entire networks to go offline.

CISPA's Yepeng Pan, and Professor Dr. Christian Rossow, claim that multiple protocols are vulnerable, including both outdated ones (QOTD, Chargen, Echo), and those currently in use (DNS, NTP, TFTP).

"If two application servers have a vulnerable implementation of said protocol, an attacker can initiate a communication with the first server, spoofing the network address of the second server (victim)," CERT/CC said. "In many cases, the first server will respond with an error message to the victim, which will also trigger a similar behaviour of another error message back to the first server."

Roughly 300,000 internet hosts are said to be vulnerable to this exploit, with Broadcom, Cisco, Honeywell, Microsoft, and MikroTik all confirming being affected.

Byju's Raveendran offers renounced shares amid latest attempts to save firm

Highlights
- *Most notably in finding ways to amenably work with a large group of dissenting investors.*
- *Aimed to gain approval for a crucial rights issue of $200 million*

One noteworthy fact about the EGM (extraordinary general meeting) was the absence of several high-profile investors, including Peak XV Partners, General Atlantic, Chan-Zuckerberg Initiative, and Prosus. These investors had, at an earlier point, expressed concerns regarding governance and strategic decisions within the company. The EGM proceeded with approximately twenty investor representatives in attendance, along with management from Think & Learn, the parent company of Byju's. Reports indicate that the meeting progressed without any objections being raised, and centered around increasing the authorized share capital to facilitate the $200 million rights issue.At the meeting, Byju Raveendran (founder of the edtech major) struck a conciliatory tone in a letter addressed to shareholders. He claimed to have received over 50% of the votes in favor of the increased share capital proposal, a move that would pave the way for the successful completion of the rights issue. The final outcome of the rights issue, however, will only be known on April 6th, and will occur at a steep discount of 99% to the company's valuation at its zenith (which amounted to $22 billion).In a gesture aimed at bridging the gap with the disgruntled investors, the embattled edtech firm further offered "renounced shares" to existing shareholders. Renounced shares refer to those that were not purchased by existing investors under protest, during the rights issue. By offering these renounced shares, Byju's is attempting to minimize the dilution of existing investor holdings, particularly those of the dissenting group.For those who need a refresher, the roots of the current discord at the edtech major can be traced back to Byju's pre-pandemic strategy. Flush with a valuation of $22 billion, the company had embarked on an aggressive acquisition spree, rapidly expanding its reach by snapping up multiple startups. This growth plan, however, was met with growing concerns from some key investors, and Prosus Ventures publicly voiced its disapproval of the company's management style and its tendency to disregard investor recommendations on financial prudence. The simmering tension finally boiled over in 2023, with Prosus, Peak XV Partners and the Chan Zuckerberg Initiative (CZI), officially resigning from Byju's board (Deloitte, its auditor at that time, parted ways with Byju's as well).Faced with a financial crunch, Byju's initiated a rights issue in January 2024, allows existing shareholders the opportunity to purchase additional shares at a discounted price, proportionate to their current holdings.

Musk to open access to Grok to all X Premium users later this week

Highlights

- *Elon Musk, CEO of Tesla Inc., has revealed plans to grant access to Grok, the company's advanced AI assistant, to all Tesla Model X Premium users.*
- *This move signifies Musk's commitment to enhancing the user experience and leveraging cutting-edge technology within Tesla vehicles.*
- *Grok, renowned for its robust capabilities in navigation, entertainment, and vehicle control, is set to revolutionise the driving experience for Tesla owners.*

Previously, access to Grok was restricted to users subscribed to X's Premium+ tier, a more expensive membership option. This limited the chatbot's reach and user base. By extending access to all X Premium subscribers, Musk is effectively making Grok available to a much larger audience. The standard X Premium subscription comes in at nearly half the price of Premium+, making Grok a more enticing perk for existing users and a potential draw for new subscribers.

Grok's rollout to all premium users of X could also boost the platform's subscriber base, as well as improve the financial health of the social media company. Reports already indicate a decline in X's user base and a shift in advertiser spending away from the platform. By offering a more attractive perk with Grok, Musk might be hoping to entice new subscribers, as well as incentivize existing ones to remain on board (in fact, data from Sensor Tower indicates a decline in X usage, with a 23% decrease since Musk assumed control of the micro-blogging site in 2022).

For those who need a reminder about Grok, it was launched November 2023, and was slated to be xAI's answer to popular chatbots like ChatGPT and Google's Gemini (formerly Bard). Unlike its competitors that prioritise factual accuracy and neutrality, Grok is designed with a touch of whimsy and a rebellious streak, inspired by the science fiction novel The Hitchhiker's Guide to the Galaxy. This means Grok might provide answers with a bit of humor or challenge conventional wisdom in its responses.

This development also unfolds against the backdrop of a tense relationship between Musk and OpenAI, the same AI research lab he co-founded and which rolled out the popular ChatGPT in 2022. Musk recently filed a lawsuit against OpenAI, accusing them of abandoning their initial mission of developing AI for the benefit of humanity in favor of a profit-driven approach. Grok's wider availability and its open-source nature can be seen as a direct challenge to OpenAI's offering, ChatGPT.

Following the lawsuit against OpenAI, xAI announced its decision to make Grok open-source under the Apache 2.0 license. Open-sourcing Grok allows for public access to the underlying code, fostering experimentation and development in the field of AI chatbots. Whether Grok will eventually be available to all X users, similar to how everyone can access ChatGPT version 3.5, remains unclear.

Intel receives $8.5Bn boost from US govt for semicon investments amid global AI chip frenzy
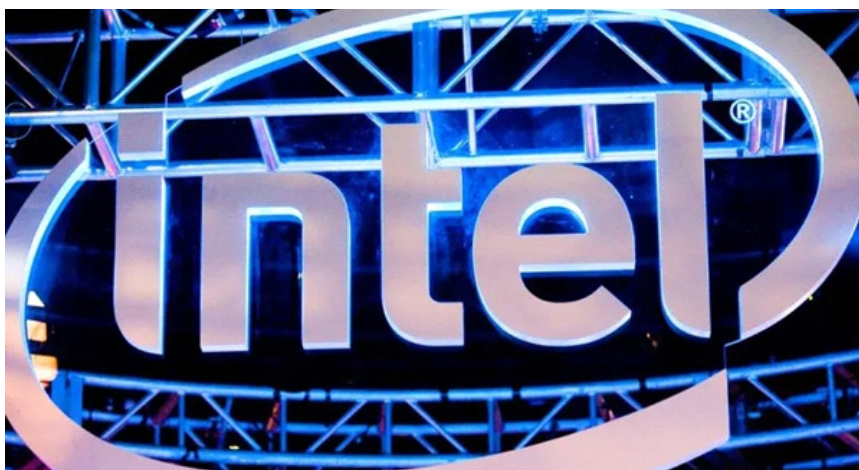
Highlights

- *In a bid to bolster domestic semiconductor production and stay ahead in the global AI chip race, Intel Corporation secures a substantial $8.5 billion boost from the US government.*
- *Strategic investment aims to fortify Intel's position as a leading semiconductor manufacturer and foster innovation in artificial intelligence technology.*

The Biden administration has taken a significant step towards bolstering domestic semiconductor manufacturing capabilities courtesy of an agreement with tech titan Intel. This preliminary agreement outlines an investment package of $20 billion, comprising $8.5 billion in grants from the Department of Commerce, and up to $11 billion in loans, aimed at supercharging Intel's chip production capacity in the US."Today is a defining moment for the U.S. and Intel as we work to power the next great chapter of American semiconductor innovation," Pat Gelsinger, Intel CEO, commented on the matter. "AI is supercharging the digital revolution and everything digital needs semiconductors. CHIPS Act support will help to ensure that Intel and the U.S. stay at the forefront of the AI era as we build a resilient and sustainable semiconductor supply chain to power our nation's future."

This agreement signifies a critical step towards achieving a key objective of the CHIPS and Science Act, a bill passed into law in 2022 and which aims to revitalise semiconductor production in the US. According to Intel's official statement, the company plans to utilize the awarded funds to construct and expand manufacturing facilities across four states: Arizona, Ohio, New Mexico, and Oregon, and there will be a particular focus on plants dedicated to producing cutting-edge semiconductor chips tailored for AI. These projects are estimated to generate over 30,000 jobs (roughly 10,000 in manufacturing and 20,000 in construction) providing a much-needed boost to local economies. Apart from this, the expansion shall also include the establishment of a brand new facility near Columbus, Ohio, marking Intel's first foray into a new US region for chip production in over four decades.

The implications of this new investment package are manifold: it addresses national security concerns by bringing chip production closer to home. Currently, a significant portion of the world's leading-edge chips are manufactured in Asia. This dependence creates vulnerabilities in the event of geopolitical tensions or supply chain disruptions. By incentivizing domestic production, the US aims to reduce its reliance on foreign suppliers and mitigate potential risks. This is essential, especially at a time when it has already impacted several industries (including the AI landscape). Generative AI – the tech that focuses on creating novel content like images, text, and music from simple text-based prompts – also relies heavily on powerful chips for processing vast amounts of data.

And if this is not enough, the agreement also aims to stimulate domestic innovation by fostering a robust domestic chip manufacturing ecosystem. Secretary of Commerce Gina Raimondo emphasized this point, highlighting the potential for the US to regain a 20% share of the global leading-edge chip market by 2030, a figure currently at zero.

Amazon pumps another $2.75Bn in AI startup Anthropic, bringing its total investment to $4Bn

Highlights

- *In a bid to bolster domestic semiconductor production and stay ahead in the global AI chip race, Intel Corporation secures a substantial $8.5 billion boost from the US government.*
- *This move brings Amazon's total investment in Anthropic to a staggering $4 billion, underscoring its commitment to fostering cutting-edge AI research and development.*

Amazon is bumping up its AI warchest for the ongoing tech wars around AI. Last year, we reported that the e-commerce behemoth Amazon was looking to invest up to $4 billion in AI startup Anthropic. Soon, it was joined by Google. Now, several months down the line, Amazon has made good on its promise and added to its initial investment of $1.25 billion by injecting an additional $2.75 billion into Anthropic, bringing its total investment in the startup to a substantial $4 billion.This investment is the largest venture capital outlay in Amazon's history, and will serve as a critical catalyst for Anthropic's development of cutting-edge AI models. To date, the San Francisco-based Anthropic has garnered significant attention for its "Claude" family of large language models (LLMs), particularly Claude 3. For those who need a refresher, Claude-3 comes in three versions, with varying capabilities and costs. The most powerful version, Opus, reportedly outperformed competitors like OpenAI's GPT-4 on certain benchmarks. This investment will enable Anthropic to accelerate the development of even more powerful and versatile AI models.As part of the agreement, Anthropic will leverage the vast computational resources of AWS cloud infrastructure, specifically the custom-built AWS Trainium and Inferentia chips, for training and deploying its advanced AI models. Anthropic's AI models will also be made accessible to AWS customers through the Amazon Bedrock service (which will be useful, and comes at a time when businesses are already using Amazon Bedrock to build their GenAI applications with Claude AI). This service allows businesses to integrate various LLM models, including those from Anthropic and other developers, into their applications and workflows. The end results could be spectacular – imagine AI-powered tools capable of generating high-quality marketing copy, automating repetitive tasks, or even assisting with product development.We have a notable history with Anthropic, together helping organizations of all sizes around the world to deploy advanced generative artificial intelligence applications across their organizations. Anthropic's visionary work with generative AI, most recently the introduction of its state-of-the art Claude 3 family of models, combined with Amazon's best-in-class infrastructure like AWS Tranium and managed services like Amazon Bedrock further unlocks exciting opportunities for customers to quickly, securely, and responsibly innovate with generative AI.

Apple to hold this year's WWDC from June 10-14

Highlights
- *With another year comes yet another annual dev-conference by Apple.*
- *Worldwide Developers Conference (WWDC) is known to make waves across the industry with its reveals and announcements*
- *The iPhone maker confirmed that its 35th annual WWDC is set to take place from June 10-14.*

The WWDC 2024 keynote presentation, slated for June 10 at the Apple Park campus in Cupertino, California, serves as the centerpiece of the conference. Led by Apple executives, including CEO Tim Cook, the keynote will be setting the stage for the unveiling of new software updates, potential hardware releases, and offering insights into Apple's vision for the future. For those who want to experience WWDC in person, space will be limited at the event held at Apple Park on June 10th. Details on how to apply to attend this special event will be available on the Apple Developer website and app. The online portion of WWDC 2024 will offer a variety of activities beyond the opening keynote address. Developers can expect sessions, workshops, and opportunities to connect with Apple developers and engineers. This is a valuable chance to learn about the latest tools, frameworks, and features that will be available in upcoming Apple products.

"We're so excited to connect with developers from around the world for an extraordinary week of technology and community at WWDC24," Susan Prescott, Apple's vice president of Worldwide Developer Relations, commented on the matter. "WWDC is all about sharing new ideas and providing our amazing developers with innovative tools and resources to help them make something even more wonderful."

What can be expected to be revealed at this year's developer conference? There is expected to be a particular focus on AI (which is unsurprising, given Apple's focus on generative AI and its efforts to catch up with the likes of Microsoft and Google in the AI race). New features and functionalities are anticipated for various operating systems, including iOS 18, iPadOS 18, macOS 15, watchOS 11, tvOS 18, and even visionOS 2, the operating system for the company's newly-released Apple Vision Pro headset. There have also been rumors about a potential integration of Google's Gemini AI with Apple devices, which could be a significant announcement at the event.

While software takes center stage, there's a chance for some hardware announcements as well. New M3-based Macs, particularly an M3 Ultra Mac Studio, are a possibility. Additionally, updates to the AirPods lineup, including both entry-level and noise-cancelling options, and perhaps even refreshed AirPods Max headphones might be unveiled. And if this is not enough, WWDC 2024 is also expected to showcase Apple's support towards the next generation (with the Swift Student Challenge). Applicants will be notified of their status on Thursday, March 28, and winners of this challenge will be eligible to apply for the in-person experience at Apple Park, giving them a unique opportunity to immerse themselves in the world of Apple development.