Integrating Technology, Driving Growth

TechTalk

GALAXY Integrating Technology | Driving Growth

SPEED UP

GALAXY OFFICE AUTOMATION PVT. LTD.

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Upscale your cyber security platform with Cisco and Galaxy

Reduce complexity and improve visibility across your entire environment. Proactively block more threats while providing seamless, secure user access from anywhere and solve hybrid work challenges with a united security approach.

Event Timing

7 **JUNE 2024**

7 PM ONWARDS

To register for the event please contact us on marketing@goapl.com

LIMITED SEATS ONLY

MD SPEAKS

Anoop Pai Dhungat
Chairman & Managing Director

Dear Readers,

Rapid Application Development or RAD, was one of my picks among the technologies that would be see widespread adaption during this year. Businesses are constantly striving to stay ahead of the competition by delivering innovative solutions to their customers quickly. This need for speed and agility has given rise to a software development approach known as RAD. Low-code and no-code platforms are fast becoming the cornerstone of RAD by accelerating development cycles, simplifying the creation of prototypes, and empowering business users to participate in the development process. These platforms enable rapid iteration, collaboration between stakeholders, and quick validation of concepts, aligning well with RAD's core principles of speed, agility, flexibility, and user involvement.

At Galaxy, we have a team of experts in low-code and no-code technologies who can help you to achieve you application development goals quicker, more secure and at a lower cost than traditional methods. Do reach out to us to see how we can help you get your applications to the market before your competitors do.

Happy Reading

Beyond Search: Google Gemini and the Future of Information

Google Gemini is here to take on OpenAI's GPT-4, but how does it work and is this the future of AI?

In 2023, ChatGPT took off, the online AI tool becoming so big that even your chronically offline uncle who doesn't own a phone was fully aware of it. But as OpenAI continues to polish and improve its prodigy child, there is a competitor ready to take over.

Soon after the launch of ChatGPT, Google made an announcement in the form of Bard. A competitor to the OpenAI service, Bard could do all the things ChatGPT could do, but with the might of the world's largest search engine behind it.

Now, Google is taking another step forward with its new project, titled Google Gemini, currently being rolled out. Seemingly already outperforming ChatGPT, it's left plenty of us wondering: is Google set to take the AI top spot in 2024?

What is Google Gemini and how does it work?

When it comes to OpenAI, the tool that everybody knows is ChatGPT. But for that tool to work it needs to be powered by something – that's where GPT-4 comes in. A large language model, GPT-4 is trained on billions of sets of data from across the internet to understand images, texts, context and many other factors.

In the case of Google, this is what Gemini is, the engine that runs its artificial intelligence programs, like Bard.

Built from the ground up and utilising teams from across Google, Gemini can generalize and understand content, including text, code, audio, image and video. Like GPT-4. Gemini was trained on a massive dataset including books, articles, code repositories, music, audio recordings and other forms of media.

All this data is broken down into a form that is more understandable to Gemini. The model then learns the relationships between different terms and media, learning how to respond to prompts, questions and proposals.

What can Gemini do?
In recent weeks, Google has worked tirelessly to showcase its Gemini technology, releasing videos of its abilities and bigging up its skills against its competitors. However, while impressive, these are all very controlled, so it is difficult to know exactly how well Gemini will perform.

In a now somewhat recent viral Google video, a person can be seen drawing various objects as Gemini describes, in real-time, what's being drawn. Better still, Gemini answers questions about the objects drawn, speaks in different languages, and even makes games from images it's shown.

However, while the video is certainly remarkable, there is a somewhat deceptive catch. Gemini isn't actually answering questions put to it in real-time, as the video implies. Instead, it's being fed the questions separately with a bit more context. Still impressive, but not quite the mind-blowing experience the video sets out.

Elsewhere, Google has shown Gemini guessing movies from combined images – show it a picture of pancakes and bacon, next to one of people dancing at a rave, ask it to guess the name of the movie, and it should be able to answer correctly (five points if you said The Breakfast Club). It can also guess when certain items of clothes should be worn (i.e. big coats are for cold weather), find connections between different words and images, and explain your child's maths homework for you.

Ultimately, because Gemini is trained across words, images, videos, code and most forms of digital content, its abilities are arguably endless.

https://shorturl.at/jrMP3

Data Science vs Data Analytics: Unpacking the differences

Though you may encounter the terms "data science" and "data analytics" being used interchangeably in conversations or online, they refer to two distinctly different concepts. Data science is an area of expertise that combines many disciplines such as mathematics, computer science, software engineering and statistics. It focuses on data collection and management of large-scale structured and unstructured data for various academic and business applications.

Meanwhile, data analytics is the act of examining datasets to extract value and find answers to specific questions. Let's explore data science vs data analytics in more detail.

Overview: Data science vs data analytics
Think of data science as the overarching umbrella that covers a wide range of tasks performed to find patterns in large datasets, structure data for use, train machine learning models and develop artificial intelligence (AI) applications. Data analytics is a task that resides under the data science umbrella and is done to query, interpret and visualize datasets. Data scientists will often perform data analysis tasks to understand a dataset or evaluate outcomes.

Business users will also perform data analytics within business intelligence (BI) platforms for insight into current market conditions or probable decision-making outcomes.

Many functions of data analytics—such as making predictions—are built on machine learning algorithms and models that are developed by data scientists. In other words, while the two concepts are not the same, they are heavily intertwined.

Data science: An area of expertise
As an area of expertise, data science is much larger in scope than the task of conducting data analytics and is considered its own career path. Those who work in the field of data science are known as data scientists. These professionals build statistical models, develop algorithms, train machine learning models and create frameworks to:

- Forecast short- and long-term outcomes
- Solve business problems

- Identify opportunities
- Support business strategy
- Automate tasks and processes
- Power BI platforms

Data science is iterative, meaning data scientists form hypotheses and experiment to see if a desired outcome can be achieved using available data. This iterative process is known as the data science lifecycle, which usually follows seven phases:

- Identifying an opportunity or problem
- Data mining (extracting relevant data from large datasets)
- Data cleaning (removing duplicates, correcting errors, etc.)
- Data exploration (analyzing and understanding the data)
- Feature engineering (using domain knowledge to extract details from the data)
- Predictive modeling (using the data to predict future outcomes and behaviors)
- Data visualizing (representing data points with graphical tools such as charts or animations)

Data analytics: Tasks to contextualize data
The task of data analytics is done to contextualize a dataset as it currently exists so that more informed decisions can be made. How effectively and efficiently an organization can conduct data analytics is determined by its data strategy and data architecture, which allows an organization, its users and its applications to access different types of data regardless of where that data resides.

Having the right data strategy and data architecture is especially important for an organization that plans to use automation and AI for its data analytics.

The benefits of data analytics
Business decision-makers can perform data analytics to gain actionable insights regarding sales, marketing, product development and other business factors. Data scientists also rely on data analytics to understand datasets and develop algorithms and machine learning models that benefit research or improve business performance.

https://shorturl.at/aFLX3

Data Protection and Privacy Act

The DPDP Act refers to the "Data Protection and Privacy Act. "The act was introduced, aiming to regulate the processing of personal data of individuals in India.

Banks, financial institutions and other entities handling personal data, would need to implement various components to comply with the Data Protection Bill, While the specifics may vary slightly depending on the final version, here are some general components they might need to implement:

▶ Data Protection Policies: Banks would need to develop comprehensive data protection policies outlining how they collect, process, store, and protect personal data in compliance with the law.

▶ Consent Mechanisms: They would need robust mechanisms for obtaining consent from customers for collecting and processing their personal data. This might include clear and easily understandable consent forms or opt-in/opt-out mechanisms.

▶ Data Security Measures: Banks would be required to implement appropriate technical and organizational measures to ensure the security of personal data, such as encryption, access controls, and regular security assessments.

▶ Data Processing Agreements: If they engage third-party service providers for data processing, banks would need to enter into data processing agreements that outline the responsibilities of each party and ensure compliance with the law.

▶ Data Localization: Depending on the final provisions of the bill, banks might be required to store certain categories of personal data within India's borders, or they might need to implement appropriate safeguards if transferring data internationally.

▶ Data Protection Officers (DPO): Banks may need to designate a Data Protection Officer responsible for overseeing compliance with data protection laws, handling data protection inquiries from customers, and serving as a point of contact for regulatory authorities.

▶ Data Breach Notification: Banks would likely need to establish procedures for detecting, reporting, and responding to data breaches in a timely manner, including notifying affected individuals and relevant authorities as required by law.

▶ Records of Processing Activities: They might be required to maintain records of their data processing activities, including the purposes of processing, categories of data subjects and personal data, and any recipients of the data.

▶ Employee Training: Banks would need to provide regular training to employees on data protection laws, policies, and best practices to ensure awareness and compliance throughout the organization.

▶ Data Subject Rights: They would need to facilitate data subject rights, such as the right to access, rectification, erasure, and data portability, and establish procedures for handling data subject requests.

Banks would need to deploy robust security solutions to protect the personal data they collect and process, in accordance with the Data Protection Bill in India. Here are some security solutions they might consider implementing:

▶ Encryption: Utilize strong encryption methods to protect sensitive data both in transit and at rest. This includes encrypting data stored in databases and encrypting communication channels such as email and web traffic.

▶ Access Controls: Implement stringent access controls to ensure that only authorized personnel have access to sensitive data. This can include role-based access controls, multi-factor authentication, and regular access reviews.

▶ Data Loss Prevention (DLP): Deploy DLP solutions to monitor and prevent the unauthorized transfer or leakage of sensitive data. These solutions can help detect and block attempts to exfiltrate data through various channels, such as email, USB drives, or cloud storage.

▶ Endpoint Security: Secure endpoints such as desktops, laptops, and mobile devices with endpoint security solutions. This includes antivirus software, firewalls, and endpoint detection and response (EDR) tools to detect and respond to security threats.

▶ Network Security: Implement robust network security measures to protect against unauthorized access and cyberattacks. This includes firewalls, intrusion detection and prevention systems (IDPS), and secure network segmentation to isolate sensitive data.

▶ Security Information and Event Management (SIEM): Deploy SIEM solutions to centrally monitor and analyze security events and logs from various systems and applications. SIEM tools can help detect and respond to security incidents in real-time.

▶ Vulnerability Management: Implement a comprehensive vulnerability management program to identify and remediate security vulnerabilities in systems and applications promptly. This includes regular vulnerability scanning, patch management, and security updates.

▶ Data Masking and Anonymization: Use data masking and anonymization techniques to protect sensitive data by replacing or obfuscating identifiable information while preserving its usability for legitimate business purposes.

▶ Incident Response Plan: Develop and regularly test an incident response plan to effectively respond to data breaches or security incidents. This plan should outline procedures for containing the incident, conducting forensics analysis, notifying affected parties, and coordinating with regulatory authorities.

▶ Security Awareness Training: Provide regular security awareness training to employees to educate them about security best practices, common threats, and their roles and responsibilities in safeguarding sensitive data.

▶ Data Protection Impact Assessments (DPIAs): Conduct DPIAs for high-risk data processing activities to assess and mitigate privacy risks. Implement measures to enhance data protection and demonstrate compliance with the law.

These security solutions can help banks enhance their cybersecurity posture and comply with the security requirements outlined in the Data Protection Bill in India. Additionally, banks should stay updated on emerging threats and evolving regulatory requirements to adapt their security measures accordingly.

These some of the key components banks might need to implement to comply with the Data Protection Bill in India. The specific requirements could vary based on the final text, additional regulations or guidelines issued by the relevant regulatory authorities.

> **Galaxy as an IT Solutions Provider strives to maintain and help the end customers to enhance their security compliance. To talk to our experts, email us at marketing@goapl.com**

Google Wallet may be coming soon to India

It looks like Google is gearing up to soon launch the Google Wallet app in India. The launch appears to part of global rollout of Google Wallet. Several users across the internet have reported on the microblogging platform X about being able to download and install the Google Wallet app on their smartphones.

"While we don't have anything new to share right now, we're always working to bring more convenience to people's digital experiences in India.

We're continuing to invest in the Google Pay app to give people easy, secure access to digital payments," said a Google spokesperson when Times of India reached out to the company.

TOI Tech checked for the same and found that the app can't be searched on the Play Store directly as yet. It shows the message: "This app is currently not available in your region" when searched for on Google Play Store.

Considering only a few users are currently able to download the app and use it, it could be a limited beta test for the app. For now, there's no official information available about the Google Wallet app launch in India. Also, Google hasn't confirmed any ongoing test run for the app in the country.

Google Wallet is a digital wallet app similar to Apple Wallet and Samsung Wallet app that allows users convenient access to essential items via phone or wearable device. It offers quick access methods, integrates with Wear OS, and stores various items like cards, tickets, and passes.

The app suggests needed items and tracks receipts. It seamlessly integrates with Google services, offering updates and notifications. Security features ensure the protection of personal data, including secure payment options.

https://tinyurl.com/595fxm8a

Microsoft readies new AI model to compete with Google, OpenAI

Microsoft is training a new, in-house AI language model large enough to compete with those from Alphabet's Google and OpenAI. The new model, internally referred to as MAI-1, is being overseen by recently hired Mustafa Suleyman, the Google DeepMind co-founder and former CEO of AI startup Inflection, the report said, citing two Microsoft employees with knowledge of the effort.

The exact purpose of the model has not been determined yet and will depend on how well it performs. Microsoft could preview the new model as soon as its Build developer conference later this month, the report said.

Microsoft declined to comment when contacted by Reuters. MAI-1 will be "far larger" than the previous smaller, open source models Microsoft had previously trained which means it will be more expensive, according to the report.

Microsoft launched a smaller artificial intelligence model called Phi-3-mini as it looks to attract a wider client base with cost-effective options. The company has invested billions of dollars in OpenAI and deployed the ChatGPT maker's technology across its suite of productivity software, allowing it to take an early lead in the generative AI race.

Microsoft has been setting aside large cluster of servers equipped with Nvidia's graphic processing units along with large amounts of data to improve the model, according to the report. MAI-1 will have roughly 500 billion parameters, the report said, while OpenAI's GPT-4 is reported to have one trillion parameters and Phi-3 mini measures 3.8 billion parameters. Microsoft tapped Suleyman in March as the head of its newly created consumer AI unit and hired several employees of Inflection. The new model is not carried over from Inflection, although it may build on training data from the startup, the report added.

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