ITPV

Connecting with Solution Provider in
EMERGING MARKET

Vol IX | Issue 2 | June 2024 | Pages 36

■ Northern ■ Eastern ■ Maharashtra ■ Gujarat ■ MP & Chattisgarh ■ North East ■ Southern ■ UP & Uttarakhand ■ Bihar & Jharkhand

The AI-Cloud Convergence: Revolutionizing India's Business Landscape

Ramprakash Ramamoorthy
Zoho Corporation

Srinivaschary T
Dell Technologies India

Anuj Gupta
Hitachi Systems

Ravi Maguluri
Sify Technologies

Anil Lakhanpal
Bounteous x Accolite

TECHPLUS MEDIA

Looking for a compact, efficient and robust UPS? Look no further!

VERTIV.

Presenting

Liebert ITA2 30kVA

A fully digital, highly reliable, double-conversion UPS solution.

Its cutting-edge design enables seamless integration into your current system, or various other ecosystems. And it's tailored for global deployment in a low carbon, compact footprint. The ITA2 is the ultimate level of engineering and dynamics from Vertiv. So, you can deploy this innovative, next-gen and extract great performance at low costs. Adding up to peace of mind. If you're looking to power your infrastructure, or upgrade your already protected systems, the ITA2 is a great addition to your support backup.

Talk to us today!

Explore solutions at Vertiv.com/en-in
Call Tollfree : 1-800-2096070
E-mail : marketing.india@vertiv.com

Corporate Office : Plot C-20, Rd No.19, Wagle Ind Estate, Thane (W), 400604. India

SCAN CODE
TO KNOW MORE

National Authorised Distributors

Rashi Peripherals Limited
Ms. Manisha@ +91 8879690065

Supertron Electronics Pvt. Ltd.
Mr. Sanjay@ +91 9811059025

www.crucial.in | 1800-425-3234

CONTENT

SEAGATE

TESTED.

160+ Quality Tests
Ensures long-term durability

Rescue DATA RECOVERY SERVICES
3 YEARS INCLUDED*
*Not valid on 1TB drives

OPTIMIZED.

ImagePerfect™ Firmware
Zero dropped frames
Non-stop vigilance

SkyHawk Health Management
Real-time prevention, intervention & recovery

Up to 550TB Workload Rate**
Always on long-term recording

Up to 2.5 Million Hours
Mean Time Between Failure

SUPPORTS UP TO 64 HD CAMERAS

Up to 5 Years Warranty

PROVEN.

40+ YEARS OF EXPERIENCE

VARINDIA Star Nite AWARDS 2023
BEST HARD DRIVE AWARD 2023

NCN Most Innovative Product of the Year 2022
MOST INNOVATIVE PRODUCT OF THE YEAR 2022

15 dt AWARDS 2023
BEST HARD DRIVE BRAND 2023

**Skyhawk video drives are designed for always-on workloads of 180TB/year, 550TB/year for Skyhawk AI.

www.seagate.com

SCAN TO LEARN MORE

For enquiries, contact: Rahul Seth, Regional Head | **Mobile -** 9819020604 | **Email:** Rahul.Seth@seagate.com
For marketing support, contact: Talwinder Singh | **Mobile -** 9650164235 | **Email:** talwinder.singh@seagate.com

The AI-Cloud Convergence: Revolutionizing India's Business Landscape

At the crossroads of technological innovation and business strategy lies a revolution: the marriage of artificial intelligence (AI) and cloud computing. In India, this amalgamation is more than just a buzzword; it's a transformative journey reshaping how businesses operate, innovate, and compete. From streamlining operations to enhancing customer experiences, the impact of AI-powered cloud services is palpable across sectors, promising a future where innovation knows no bounds

Amit Singh

The convergence of artificial intelligence (AI) and cloud computing is driving a seismic shift in how businesses operate, innovate, and compete on a global scale. AI-powered cloud services, which combine the vast processing capabilities of cloud platforms with the intelligent insights generated by AI algorithms, are transforming industries by enhancing efficiency, reducing costs, and enabling new levels of innovation. This transformation is particularly pronounced in India, where the adoption of these advanced technologies is accelerating rapidly, offering significant potential to revolutionize various sectors of the economy. "AI is revolutionizing cloud services in India, poised to become the second-largest market globally within the next three years, just behind the United States," says Ramprakash Ramamoorthy, Director of AI Research, Zoho Corporation.

How AI-Powered Cloud Services are Reshaping Business Landscape

AI-powered cloud services encompass various technologies, including machine learning (ML), natural language processing (NLP), computer vision, and predictive analytics. These services are typically delivered via cloud platforms, allowing businesses to access sophisticated AI capabilities without the need for substantial on-premises infrastructure.

- **Infrastructure Management and Optimization:** AI is revolutionizing infrastructure management and optimization in cloud environments. With AI-driven tools, businesses can dynamically allocate resources, optimize workloads, and enhance scalability. For instance, AI algorithms can predict demand patterns, allowing cloud platforms to automatically adjust resources in real-time. This not only ensures optimal performance but also reduces operational costs by minimizing resource wastage.

  Dell Technologies has developed AI-driven infrastructure solutions that enable businesses to manage their cloud resources predictively.

> "AI-driven models facilitate the reduction of redundant cloud resources and mitigate the risk of costly cloud sprawl. By quickening cloud cost tracking, budgeting, and forecasting, businesses can efficiently manage their cloud expenditures, ensuring optimal utilization of resources."
>
> **RAMPRAKASH RAMAMOORTHY,**
> **Director of AI Research, Zoho Corporation**

According to Srinivaschary T, Lead - Solution Architect at Dell Technologies India, "Our AI-driven infrastructure solutions enable businesses to predictively manage their cloud resources, ensuring optimal performance and cost-efficiency. This transformation is crucial for businesses in India looking to scale their operations without compromising on efficiency or performance."

- **Data Analytics and Business Intelligence:** AI-powered cloud services empower Indian businesses with advanced data analytics and business intelligence capabilities. With AI-driven analytics, organizations can gain real-time insights, conduct predictive analysis, and personalized recommendations. This is pivotal in today's data-driven world where actionable insights can provide a significant competitive edge.

  For example, a major retail client of Dell Technologies has utilized AI analytics to predict customer buying patterns. This has led to improved inventory management and increased sales, demonstrating how AI-powered cloud solutions can drive tangible business benefits. "AI-powered cloud services are empowering Indian businesses with advanced data analytics and business intelligence capabilities," says Srinivaschary. "This level of insight is transformative and gives businesses a significant competitive edge."

- **Natural Language Processing (NLP) and Text Analytics:** Natural Language Processing (NLP) and text analytics in the cloud are unlocking valuable insights from unstructured data sources. AI algorithms can perform sentiment analysis, entity recognition, and language translation, which are crucial for businesses handling large volumes of textual data.

  In the customer service industry, AI-powered NLP tools help analyze customer feedback in real time, enabling companies to respond promptly and

> "AI-powered cloud services empower Indian businesses with advanced data analytics and business intelligence capabilities. This level of insight is transformative and gives businesses a significant competitive edge."

SRINIVASCHARY T,
Lead - Solution Architect, Dell Technologies India

improve service quality. "For example, in the customer service industry, AI-powered NLP tools help analyze customer feedback in real-time, enabling companies to respond promptly and improve their service quality. This capability is a game-changer for businesses aiming to enhance customer satisfaction and loyalty," adds Srinivaschary.

- **Computer Vision and Image Recognition:** AI-powered computer vision and image recognition services in the cloud are enabling businesses to analyze visual content, detect objects, and enhance user experiences in applications ranging from e-commerce to healthcare. For instance, e-commerce companies are using AI-driven image recognition to enhance product search and recommendation systems, improving the overall shopping experience.

  In healthcare, AI algorithms deployed on cloud platforms can analyze medical images such as X-rays, MRIs, and CT scans, making diagnoses more accurate. This can lead to earlier detection of diseases like cancer and improved patient outcomes.

- **Speech Recognition and Voice Assistance:** AI-driven speech recognition and voice assistance services in the cloud are enabling natural language interaction with applications and devices, driving enhanced user experiences and accessibility across various industries. These technologies are being integrated into customer service applications, smart home devices, and more, providing intuitive and efficient user interfaces.

- **Security and Threat Detection:** Security remains a top concern for businesses adopting cloud services. AI-powered security and threat detection solutions are enhancing cloud security by identifying and mitigating threats in real time. AI algorithms can analyze vast amounts of data to detect unusual patterns and potential security

"Coca-Cola's advert 'Masterpiece' brings famous works of art to life, seamlessly integrating AI-augmented animation with live action. It was created with OpenAI, using their DALL-E2 generative image model and ChatGPT. This initiative showcases how AI can empower creativity and transform advertising."

ANUJ GUPTA, CEO, Hitachi Systems

breaches, providing robust protection for sensitive data and applications.

- **Predictive Maintenance and IoT Analytics:** The combination of AI and the Internet of Things (IoT) in the cloud is enabling predictive maintenance and advanced IoT analytics. In manufacturing, for example, AI-powered predictive maintenance solutions can analyze data from IoT sensors to predict equipment failures before they occur. This reduces downtime and maintenance costs, improving operational efficiency.

- **Improved Automation:** AI-driven automation is streamlining business processes across various industries. From automating repetitive tasks to managing complex workflows, AI in the cloud is enhancing productivity and allowing employees to focus on more strategic initiatives. This is particularly beneficial in sectors like finance, where AI can automate fraud detection and compliance processes, reducing manual efforts and improving accuracy.

- **Predictive Analytics:** AI-powered predictive analytics in the cloud is helping businesses forecast future trends and outcomes by analyzing past data patterns. This capability is transforming decision-making processes across industries, enabling companies to anticipate market shifts, optimize supply chains, and enhance customer experiences.

- **Cost Optimization:** AI-driven cost optimization solutions in the cloud are helping businesses manage their cloud spending more effectively. By analyzing usage patterns and predicting future needs, AI can recommend cost-saving measures such as rightsizing resources and identifying underutilized services. This ensures that businesses get the most value from their cloud investments. "AI-driven models facilitate the reduction of redundant cloud resources and mitigate the risk of costly cloud sprawl. By

"Due to skill shortage and apprehension of the timelines and lack of assured success, customers prefer proven readymade solutions, little receptive to the fact that each business runs on its tacit knowledge and any insights, wisdom generated at some other company may not necessarily be applicable straight away."

RAVI MAGULURI,
CTO – Cloud and Digital Services, Sify Technologies

quickening cloud cost tracking, budgeting, and forecasting, businesses can efficiently manage their cloud expenditures, ensuring optimal utilization of resources," adds Ramamoorthy.

By leveraging these AI technologies through cloud platforms, businesses can deploy scalable, flexible, and cost-effective solutions that drive significant improvements in operational efficiency and innovation.

AI-powered Cloud Adoption

India is witnessing a robust adoption of AI-powered cloud services, driven by the country's burgeoning digital economy and the government's push towards digital transformation. According to industry reports, the Indian cloud market is expected to grow significantly, with AI and machine learning capabilities being key drivers of this growth.

Indian enterprises are increasingly leveraging AI-powered cloud services to streamline operations, enhance customer experiences, and gain competitive advantages. For example, Zoho Corporation's Ramamoorthy, notes that their AI-driven cloud cost management tool, CloudSpend, provides comprehensive visibility and smart forecasting, ensuring optimal resource utilization and cost efficiency for businesses. This tool supports leading cloud platforms like AWS, Microsoft Azure, and Google Cloud Platform, empowering enterprises to achieve operational excellence and financial efficiency. "As organizations increasingly adopt multiple cloud platforms to diversify operations and cut costs, AI-powered tools like CloudSpend provide visibility and control across various cloud environments. This enables businesses to streamline operational expenses and adhere to FinOps best practices," says Ramamoorthy.

Impact on Industries

The transformative impact of AI-powered cloud services is evident across various sectors in India, each reaping unique benefits from these advanced technologies.

- **Healthcare:** In healthcare, AI-powered cloud services are revolutionizing

"In the future, SaaS platforms are expected to offer a wide range of AI-powered services to cater to diverse requirements, such as customer targeting and AI-driven chatbots for customer service."

ANIL LAKHANPAL,
Head of Cloud Practice, Bounteous x Accolite

diagnostics, treatment planning, and patient care. AI algorithms can analyze vast amounts of medical data to provide accurate diagnoses and personalized treatment recommendations. For instance, AI-driven image analysis helps radiologists detect anomalies in medical images with high precision, leading to earlier and more accurate diagnoses. This technology is particularly beneficial in resource-constrained settings, where access to specialized medical expertise is limited.

- **Finance:** The banking and financial services sector is a frontrunner in adopting AI-powered cloud solutions. AI is used for real-time data analysis, personalized investment recommendations, and robust security measures. Ramamoorthy of Zoho highlights the role of AI in fraud detection, where massive datasets are monitored in real time to flag suspicious activities. "BFSI organizations use AI-powered cloud services to analyze customer data and give personalized investment recommendations, use chatbots to solve FAQs, and basic queries, and be available 24/7. Furthermore, the detection of fraudulent activities is pivotal and with AI they can monitor massive datasets and have real-time analysis to flag any suspicious activities."

- **Agriculture:** In agriculture, AI-powered cloud services are helping farmers optimize crop yields, manage resources efficiently, and improve supply chain logistics. AI-driven predictive analytics can forecast weather patterns, pest infestations, and crop diseases, enabling farmers to take proactive measures. Cloud-based platforms provide real-time data on soil health, moisture levels, and crop growth, allowing for precision farming practices that enhance productivity and sustainability.

- **Manufacturing:** The manufacturing sector is leveraging AI-powered cloud services for predictive maintenance, quality control, and supply chain optimization. AI algorithms analyze real-time data from IoT sensors to predict equipment failures and schedule maintenance, reducing downtime and maintenance costs. Computer vision technologies are used for quality control processes, identifying defects in products with high accuracy. Additionally, AI-driven supply chain analytics optimize production schedules and logistics, ensuring timely delivery of products.

  "Coca-Cola's advert "Masterpiece" is an excellent example. This critically acclaimed video brings famous works of art to life, seamlessly integrating AI-augmented animation with live action. It was created with OpenAI, using their DALL-E2 generative image model and ChatGPT. This initiative showcases how AI can empower creativity and transform advertising," says Anuj Gupta, CEO of Hitachi Systems.

- **Retail:** In retail, AI-powered cloud services are transforming customer experiences and operational efficiency. AI-driven recommendation engines provide personalized product suggestions, enhancing customer engagement and sales. Predictive analytics help retailers forecast demand, manage inventory, and optimize pricing strategies. AI-powered chatbots and virtual assistants improve customer service by providing instant responses to inquiries and support requests. "For supply chain automation Cloud-based AI solutions can analyze data from logistics, and suppliers and forecast demands to optimize the production and delivery schedules," adds Ramamoorthy.

  Further, startups have developed AI-enabled business automation platforms and applications to enhance customer experience in retail. "These solutions involve integrating AI and GenAI for superior quality, reduced costs and drastically reduced customer response times in a highly secured environment. GenAI

enables a quick synopsis of customer interaction history, allowing agents to resolve issues in real time. It includes image recognition for item replacement/return and a very efficient ticket management system," says Gupta.

Navigating Challenges

Despite the significant benefits, the widespread adoption of AI-powered cloud services in India faces several challenges.

- **Data Privacy and Security Concerns:** India lacks comprehensive data protection laws, raising concerns about data privacy and security. Users and organizations are wary of storing sensitive data on the cloud due to the risk of data breaches and unauthorized access. Addressing these concerns requires robust data encryption, access controls, and compliance with industry regulations.

- **Talent Shortage:** There is a shortage of skilled professionals with expertise in AI and cloud technologies in India. Building and managing AI-powered cloud solutions require specialized knowledge, which many organizations may lack, hindering their ability to leverage these services effectively. Industry stakeholders need to invest in education and training programs to bridge this skills gap. "Due to skill shortage and apprehension of the timelines and lack of assured success, customers prefer proven readymade solutions, little receptive to the fact that each business runs on its tacit knowledge and any insights, wisdom generated at some other company may not necessarily be applicable straight away," says Ravi Maguluri, CTO – Cloud and Digital Services, Sify Technologies.

- **Regulatory Barriers:** The regulatory landscape governing AI and cloud computing in India is evolving, leading to uncertainty among businesses regarding compliance requirements. A lack of clear guidelines and standards can deter organizations from adopting AI-powered cloud services. Policymakers must establish a clear and supportive regulatory framework to foster innovation and adoption.

- **Infrastructure Limitations:** Despite significant improvements, India's internet infrastructure still faces challenges such as slow internet speeds and unreliable connectivity in many regions. This affects the performance and accessibility of cloud services, particularly those relying on real-time data processing. Investments in digital infrastructure are crucial to overcoming these limitations.

- **Cost Concerns:** While cloud computing offers scalability and cost-effectiveness, the initial investment required for setting up AI infrastructure and ongoing subscription costs can be prohibitive for some organizations, particularly small and medium-sized enterprises (SMEs) in India. Businesses need to carefully evaluate the cost-benefit ratio and explore financing options to support their AI initiatives.

While the value of AI is universally recognized, crafting a viable business case remains challenging. AI-powered services often demand substantial resources, and quantifying the corresponding revenue or operational upside can be complex, says Anil Lakhanpal,

Head of Cloud Practice, Bounteous x Accolite.

Bright Horizons

The future of AI-powered cloud services in India is bright, with several emerging trends and innovations poised to shape the landscape.

- **Increased Investment:** As businesses recognize the potential of AI-powered cloud services, investment in these technologies is likely to increase. Both private sector companies and the government are expected to invest more in this area, driving further growth and innovation.
- **Skill Development:** To overcome the challenge of a lack of skilled professionals, there will likely be a boost in education and training programs focused on AI and cloud computing. This would result in a larger pool of experts in the field, facilitating the adoption of these technologies.
- **Strengthened Infrastructure:** Given the digital push in the country, we can expect significant improvements in India's digital infrastructure. Faster internet speeds and a more stable power supply would make it easier to implement and use AI-powered cloud services.
- **Improved Data Privacy and Security:** As data privacy becomes a global concern, India is expected to strengthen its data protection laws. This could make businesses more comfortable with using AI-powered cloud services.
- **Multi-Cloud and Hybrid Cloud Strategies:** Organizations will increasingly adopt multi-cloud and hybrid cloud strategies for AI deployments, leveraging multiple cloud providers and on-premises infrastructure to maximize flexibility, resilience, and cost-efficiency. Interoperability standards and open-source frameworks will facilitate seamless integration and portability of AI workloads across heterogeneous cloud environments.
- **AI-Driven DevOps and MLOps:** AI and cloud technologies will converge to enable AI-driven DevOps and MLOps practices, facilitating the end-to-end lifecycle management of AI applications from development to deployment and monitoring. Cloud-native tools and platforms will incorporate AI capabilities to automate workloads.
- **Decentralization and Smaller Models:** The varied requirements of enterprises will drive the emergence of smaller, adaptable, and more focused AI models that consume fewer resources but deliver high-impact results. This trend aligns with the decentralization of AI services, promoting flexible and contextually relevant solutions.

In the future, SaaS platforms are expected to offer a wide range of AI-powered services to cater to diverse requirements, such as customer targeting and AI-driven chatbots for customer service, adds Lakhanpal of Bounteous x Accolite.

Conclusion

AI-powered cloud services are revolutionizing industries across India, offering unprecedented opportunities for innovation, efficiency, and growth. By leveraging advanced AI technologies through scalable and flexible cloud platforms, Indian businesses are transforming their operations, enhancing customer experiences, and gaining competitive advantages.

However, the journey is not without challenges. Data privacy concerns, talent shortages, regulatory barriers, infrastructure limitations, and cost considerations must be addressed to realize the full potential of AI-powered cloud services.

Looking ahead, the future of AI-powered cloud services in India is promising, with increased investment, skill development, and technological advancements paving the way for continued growth. As businesses, startups, and technology providers capitalize on these opportunities, AI and cloud computing will play a pivotal role in shaping India's digital economy and driving its future economic landscape.

SRINIVASCHARY T,
Lead - Solution Architect ,
Dell Technologies India

AI and cloud technologies will converge to enable AI-driven DevOps and MLOps practices: Dell Technologies

As India accelerates its digital transformation journey, the convergence of artificial intelligence (AI) and cloud computing is emerging as a pivotal force reshaping the business landscape. In an exclusive interview, Srinivaschary T, Lead - Solution Architect at Dell Technologies India, shares his insights into the current global landscape of AI and cloud computing adoption and their intersection. In an interaction with Amit Singh, he discusses how companies leverage the scalability and accessibility of cloud platforms to deploy AI solutions, the innovative services introduced by cloud providers, and Dell Technologies' role in capturing this opportunity. From improved data management to cutting-edge AI services, Srinivaschary T provides a comprehensive overview of how AI-powered cloud solutions are driving innovation and unlocking new opportunities for growth across various industries in India.

Amit Singh: Can you share insights into the current global landscape of AI and cloud computing adoption and their intersection?

Srinivaschary T: The intersection of AI and cloud computing has been deepening as companies want to leverage the scalability and accessibility of cloud platforms to deploy AI solutions. Cloud providers have since introduced AI-specific services such as machine learning (ML) platforms, AI model hosting, and AI training tools, making it easier for businesses to integrate AI into their workflows without needing extensive in-house expertise. From cloud-native interoperability to innovative database technologies and infrastructure solutions, businesses are on the lookout for delivering efficient data management

options. Service providers like Dell Technologies have moved ahead to capture this opportunity and introduce services that help to unlock the capabilities of multi-cloud design and AI seamlessly with the convenience of customized platforms.

Dell Technologies in particular has launched data management solutions that simplify locating, accessing, and processing data across environments. To enable streamlined integration of AI and cloud computing, our solutions allow quicker access to data to speed model tuning and business outcomes so that a business can leverage a turnkey experience that simplifies purchase, deployment, and lifecycle management.

Amit: How do you see AI transforming cloud services in India? What are the elements of cloud services that AI is transforming?

Srinivaschary: According to the Dell Technologies Innovation Catalyst research, only 26% of Indian businesses said they are well-established with GenAI tools. 61% of businesses currently require GenAI-ready devices with computing, memory, and storage to handle heavy AI development and deployment. In India, only 29% of organizations have a multi-cloud infrastructure.

This situation needs to transform for the better especially if Indian businesses want to progress in the future of work. The integration of AI and cloud holds promise in a market like India where competitive speed and data-to-market processes help in gaining competitive advantage. Algorithms driven by AI in cloud computing drive cloud data storage, making analysis more effective. Businesses can use machine learning models to extract actionable insights from existing information repositories. In the forthcoming era of AI algorithms deployed via cloud services, the capability to anticipate future trends and outcomes by analyzing past data patterns will be heightened. This advancement has empowered advanced analytics and predictive modeling functionalities. Alongside the growth of cloud-based AI, edge computing and edge AI has gained traction. Edge computing is also growing to process data closer to the source of generation, reducing latency and bandwidth usage. Edge AI will let AI inference be performed on edge devices, such as IoT devices, enabling real-time decision-making and autonomous functionality without relying solely on cloud connectivity.

> "With AI-driven analytics, organizations can gain real-time insights, conduct predictive analysis, and personalize recommendations, all of which are pivotal in today's data-driven world."

Amit: What unique opportunities or challenges do AI-powered cloud services present for industries in India?

Srinivaschary: AI-powered cloud providers offer specialized services that enable developers to easily integrate AI and ML capabilities into their applications. This democratization of advanced technologies empowers businesses to harness the potential of data-driven insights, automation, and intelligent decision-making, fostering innovation across diverse sectors. Successful adoption of Cloud Computing empowers organizations to innovate, improve customer experiences, and optimize operations without compromising performance and security.

However, executing this adoption successfully requires careful planning, preparation, and continuous review of strategies. According to the recent Innovation Catalyst Research, 89% of the organizations in India face challenges when building a cloud strategy to support innovation. Businesses should partner with experts who understand their transformation vision and possess the expertise to guide them through their journey of transformation. It is crucial to ensure a robust multi-cloud solution that offers flexibility, scalability, and seamless deployment of emerging technologies like AI/ML. Businesses must proactively manage inefficiencies and regularly review their strategies to stay ahead of the innovation curve.

Amit: What factors are driving or hindering the adoption of AI-powered cloud services in India's business landscape?

Srinivaschary: The lack of AI skills and confidence in AI as an enterprise technology is one of the key factors hindering its integration with the cloud as a platform. According to the findings of the Dell Technologies Innovation Catalyst research, while 95% of Indian respondents believe AI and GenAI will significantly transform their industry, 89% of organizations have employees facing challenges with driving innovation and a similar percentage of businesses face challenges when building a multi-cloud strategy to support innovation.

Organizations with existing legacy systems and on-premises infrastructure may encounter difficulties integrating AI-powered cloud services into their existing IT environments.

In India, 55% of organizations are unable to currently turn data into real-time insights, according to the findings of the Dell Technologies Innovation Catalyst research.

Data privacy can also arise as a concern against AI powering cloud infrastructure. Organizations may be hesitant to migrate sensitive data and workloads to the cloud due to concerns about data privacy, security breaches, and regulatory compliance. According to the Dell Technologies Innovation Catalyst research, 73% of

businesses fear Generative AI will introduce new security and privacy challenges. Ensuring robust data encryption, access controls, and compliance with industry regulations is crucial for addressing these concerns.

To drive the adoption of AI-powered cloud technology, businesses need to recognize the potential of AI in driving innovation. It can enhance operational efficiency, and help gain a competitive edge in the market. Adopting AI-powered cloud services will allow organizations to experiment with new AI-driven capabilities and quickly bring innovative products and services to market. The proliferation of data sources and the increasing connectivity of devices and systems generate vast amounts of data that can be leveraged for AI-driven insights and decision-making

Amit: Could you share detailed examples illustrating AI-powered cloud solutions' practical applications and benefits in various industries?

Srinivaschary: AI and cloud computing adoption have a lot of potential in key sectors like healthcare, finance, manufacturing, retail, and transportation leading the way in implementing AI-driven solutions tailored to their specific needs and challenges. As more organizations adopt hybrid and multi-cloud strategies to maximize flexibility, cost-efficiency, and resilience, they can choose the best cloud services for their specific AI workloads and easily scale resources as needed.

The convergence of AI and cloud computing is reshaping industries, revolutionizing businesses, and opening up a world of possibilities. For instance, in the healthcare space, AI algorithms deployed on cloud platforms can analyze medical images such as X-rays, MRIs, and CT scans making diagnoses more accurate. This can lead to earlier detection of diseases like cancer and improved patient outcomes. Financial institutions leverage AI algorithms on cloud platforms to analyze vast amounts of transactional data in real time and identify suspicious patterns indicative of fraudulent activities. By detecting and preventing fraud more effectively, banks and financial services firms can safeguard their customers' assets and maintain trust in the financial system. In the larger business domain, harnessing the benefits of cloud-based AI has become pivotal, reshaping how businesses operate. Among these advantages, cost savings are a beacon of efficiency, spearheaded by including AI in cloud computing. So, consider a manufacturing industry striving to streamline regular operations. By adopting AI cloud solutions, they can optimize their resource allocation through real-time analytics, ensuring that machinery operates at peak efficiency, and minimizing downtime.

Such use cases help demonstrate how AI-powered cloud solutions can drive tangible benefits across diverse industries by enabling advanced analytics, automation, and optimization of key processes and workflows.

> "AI-powered cloud providers offer specialized services that enable developers to easily integrate AI and ML capabilities into their applications. This democratization of advanced technologies empowers businesses to harness the potential of data-driven insights, automation, and intelligent decision-making."

Amit: How do you anticipate AI and cloud technologies evolving and converging to drive further innovation and disruption across industries?

Srinivaschary: The initial proof of concepts for edge AI will evolve into tangible improvements across the manufacturing, retail, healthcare, and transportation sectors. Customers will develop and deploy specialized models tailored to their specific domains, fields of study, and processes. Organizations need to leverage their data for training and refining new models, performing inference at the point of data generation. With an increasing number of resources moving to the network's edge, computation, and data storage will become more prevalent.

Organizations will increasingly adopt multi-cloud and hybrid cloud strategies for AI deployments, leveraging multiple cloud providers and on-premises infrastructure to maximize flexibility, resilience, and cost-efficiency. Interoperability standards and open-source frameworks will facilitate seamless integration and portability of AI workloads across heterogeneous cloud environments. AI and cloud technologies will converge to enable AI-driven DevOps and MLOps practices, facilitating the end-to-end lifecycle management of AI applications from development to deployment and monitoring. Cloud-native tools and platforms will incorporate AI capabilities to automate workloads.

The varied requirements of enterprises will drive the emergence of smaller, adaptable, and more effective language models. As AI becomes decentralized and algorithms evolve to accommodate smaller models and datasets, the demand for appropriately sized, energy-efficient infrastructure grows in significance.

Dell Technologies is well-positioned to understand customer requirements and provide consulting services to build robust multi-cloud strategies for accelerated digital transformation. It is also fully prepared to provide customers with AI solutions and expertise that unlock the power of AI, automate intelligent decisions, and help define their paths to the future.

KONICA MINOLTA

EXPERIENCE THE COLOURFUL TRANSFORMATION RETHINK COLOURS

RETHINK INTELLIGENT INNOVATIONS FOR WORKPLACE

PRINT I COPY I SCAN

A3 Colour & Mono Multifunctional Printers

bizhub i-Series

For more information: SMS "KM MFP" send to 52424 or Call: 1-800-266-2525.

Konica Minolta Business Solutions India Pvt. Ltd.
www.konicaminolta.in | marcom@bin.konicaminolta.in
Connect with us:

Giving Shape to Ideas

TRANSCON ELECTRONICS PVT. LTD.

205, 2nd Floor, Center Point Building, Hemanta Basu Sarani,
Opp. Lalit Great Eastern Hotel, Kolkata - 700001
Ph.: 22488118, 22488210, 22481620,
Mobile: +91-8337071326, Fax: 03322486604
Email: abhishek@transconelectronics.com,
Website: www.transconelectronics.com

RAMPRAKASH RAMAMOORTHY,
Director, AI Research, Zoho Corporation

Transforming India's Cloud Landscape with AI

In an enlightening discussion with Amit Singh, Ramprakash Ramamoorthy, Director of AI Research at Zoho Corporation, delves into the transformative impact of AI on cloud services in India. Ramamoorthy outlines how AI is reshaping the landscape, addressing the needs of Indian businesses, and driving innovation across various industries. As India rapidly adopts cloud technologies, he highlights the potential, challenges, and future prospects of AI-powered cloud services. Join us as we explore his insights on how AI is poised to revolutionize cloud computing in India and the pivotal role Zoho Corporation plays in this evolution

Amit Singh: How do you envision AI transforming cloud services in India? What are the elements of cloud services that AI is transforming?

Ramprakash Ramamoorthy: AI is revolutionizing cloud services in India, poised to become the second-largest market globally within the next three years, just behind the United States. With India's rapid adoption of cloud technologies, the potential for transformation is immense.

- Cost Optimization: AI-driven models facilitate the reduction of redundant cloud resources and mitigate the risk of costly cloud sprawl. By quickening cloud cost tracking, budgeting, and forecasting, businesses can efficiently manage their cloud expenditures, ensuring optimal utilization of resources.

- Multi-Cloud Management: As organizations increasingly adopt multiple cloud platforms to diversify operations and cut costs, AI-powered tools like ManageEngine's CloudSpend provide visibility and control across various cloud environments. This enables businesses to streamline operational expenses and adhere to FinOps best practices.

- Anomaly Detection: AI algorithms detect cost anomalies across multiple cloud service providers, identifying unexpected cost increases or resource usage deviations. This feature helps businesses stay proactive in managing cloud expenses and ensures transparent pricing.

As digitalization accelerates, the importance of IT management grows, propelling us toward soon reaching $1 billion in global revenue. At ManageEngine, we are at the forefront of this transformation, we are offering comprehensive IT management solutions designed to meet the evolving needs of businesses. Our CloudSpend, with its robust features and support for leading cloud platforms like AWS, Microsoft Azure, and Google Cloud Platform, is poised to empower enterprises on their cloud maturity journey, enabling them to achieve operational excellence and financial efficiency.

> "AI-driven models facilitate the reduction of redundant cloud resources and mitigate the risk of costly cloud sprawl. By quickening cloud cost tracking, budgeting, and forecasting, businesses can efficiently manage their cloud expenditures, ensuring optimal utilization of resources."

Amit: What specific AI-powered cloud services does your company offer, and how do they address the needs of Indian businesses?

Ramprakash: Businesses across India are seeking innovative solutions to streamline their operations and enhance productivity. At ManageEngine, we understand the pivotal role that AI plays in transforming enterprise IT operations. Leveraging cutting-edge AI technology, our cloud services empower Indian businesses to optimize their IT infrastructure and enhance user experience.

With CloudSpend, our cloud cost management tool, we empower businesses with comprehensive visibility and smart forecasting, ensuring optimal resource utilization and cost efficiency. Our platform follows FinOps best practices, bridging the gap between capacity planning and cost optimization in multi-cloud setups. The latest addition to CloudSpend cost anomaly detection, enhances organizational cost management by identifying unexpected cost increases or deviations in resource usage. Additionally, features like Business Units facilitate greater accountability across departments through chargebacks, while robust budgeting and forecasting capabilities enable informed decision-making with usage-based AI-driven models.

At ManageEngine, we're committed to empowering Indian businesses with AI-enabled solutions that streamline operations, enhance security, and maximize productivity. With CloudSpend, we provide actionable insights, automate routine tasks, and deliver preemptive solutions, ensuring a seamless and efficient IT environment tailored to the unique needs of Indian enterprises.

Amit: From your perspective, which industries in India are leading in the adoption of AI-powered cloud services, and what factors are driving this adoption?

Ramprakash: More digitally mature industries are ripe for AI adoption on the cloud.

- Banking and Finance - These industries require AI-powered cloud services to analyze data in real-time, have access to powerful Machine Learning models, and for robust security purposes. They use it to analyze customer data and give personalized investment recommendations, use chatbots to solve FAQs, and basic queries, and be available 24/7. Furthermore, the detection of fraudulent activities is pivotal and with AI they can monitor massive datasets and have real-time analysis to flag any suspicious activities.

- Manufacturing - With AI-powered cloud services manufacturing industries can analyze the real-time data from sensors to identify any defect in the machinery and predict when maintenance is required to reduce the

downtimes. Through Computer Vision, they utilize AI for quality control processes to identify products with defects using high precision. For supply chain automation Cloud-based AI solutions can analyze data from logistics, and suppliers and forecast demands to optimize the production and delivery schedules.

- Technology Sector- The technology sector naturally is an adopter of AI-powered cloud services, they use it for automating redundant processes, machine learning, data, and predictive analytics.

To conclude Indian companies are actively adopting cloud-powered AI solutions to optimize, gain insights from data, and improve customer experiences. Moreover, the scalability and advanced capabilities offered help the companies to stay ahead.

Amit: What are some of the main challenges hindering the widespread adoption of AI-powered cloud services in India?

Ramprakash: Here are the major challenges:

- Data Privacy and Security Concerns: India lacks comprehensive data protection laws, which raises concerns about data privacy and security. Users and organizations are wary of storing sensitive data on the cloud due to the risk of data breaches and unauthorized access.
- nfrastructure Limitations: Despite significant improvements, India's internet infrastructure still faces challenges such as slow internet speeds and unreliable connectivity in many regions. This affects the performance and accessibility of cloud services, particularly those relying on real-time data processing.
- Regulatory Uncertainty: The regulatory landscape governing AI and cloud computing in India is evolving, leading to uncertainty among businesses regarding compliance requirements. A lack of clear guidelines and standards can deter organizations from adopting AI-powered cloud services.
- Skills Gap: There is a shortage of skilled professionals with expertise in AI and cloud technologies in India. Building and managing AI-powered cloud solutions require specialized knowledge, which many organizations may lack, hindering their ability to leverage these services effectively.
- Cost Concerns: While cloud computing offers scalability and cost-effectiveness, the initial investment required for setting up AI infrastructure and ongoing subscription costs can be prohibitive for some organizations, particularly small and medium-sized enterprises (SMEs) in India.

Addressing these challenges will require a concerted effort from policymakers, industry stakeholders, and educational institutions to create an enabling environment for the widespread adoption of AI-powered cloud services in India. This includes implementing robust data protection regulations, investing in infrastructure development, promoting skill development initiatives, and fostering a culture of innovation and technology adoption.

> "AI algorithms detect cost anomalies across multiple cloud service providers, identifying unexpected cost increases or resource usage deviations. This feature helps businesses stay proactive in managing cloud expenses and ensures transparent pricing."

Amit: How do you see the landscape of AI-powered cloud services evolving in India in the coming years, and what role does your company aim to play in this evolution?

Ramprakash: The future of AI-powered cloud services in India looks promising, with continued growth, innovation, and collaboration expected to drive widespread adoption and unlock new opportunities for businesses and society as a whole.

- Increased Investment: As businesses recognize the potential of AI-powered cloud services, investment in these technologies is likely to increase. Both private sector companies and the government are expected to invest more in this area.
- Skill Development: To overcome the challenge of a lack of skilled professionals, there will likely be a boost in education and training programs focused on AI and cloud computing. This would result in a larger pool of experts in the field, facilitating the adoption of these technologies.
- Strengthened Infrastructure: Given the digital push in the country, we can expect significant improvements in India's digital infrastructure. Faster internet speeds and a more stable power supply would make it easier to implement and use AI-powered cloud services.
- Improved Data Privacy and Security: As data privacy becomes a global concern, India is expected to strengthen its data protection laws. This could make businesses more comfortable with using AI-powered cloud services.

AI Solutions Catering to Personalization, Segmentation, and Security will become More Accessible to Businesses

ANIL LAKHANPAL,
Head of Cloud Practice,
Bounteous x Accolite

In an in-depth conversation with Amit Singh, Anil Lakhanpal, Head of Cloud Practice, Bounteous x Accolite, sheds light on the transformative impact of AI on cloud services in India. With a keen understanding of the evolving landscape, Lakhanpal discusses how AI is driving innovation, enhancing operational efficiency, and addressing the specific needs of Indian businesses. From banking to education, and logistics to payments, AI-powered cloud services are revolutionizing industries. Join us as Lakhanpal outlines the opportunities and challenges in this dynamic sector, and shares his vision for the future of AI in cloud computing

Amit Singh: How do you envision AI transforming cloud services in India? What are the elements of cloud services that AI is transforming?

Anil Lakhanpal: AI is poised to revolutionize cloud services across various dimensions soon. As clients increasingly utilize cloud services delivered as IaaS, PaaS, or SaaS from diverse providers, AI will ensure that the expected value is delivered by the service providers. So, here's how AI is reshaping cloud services:

- **AI-Driven Cloud Platform Management:** In the coming years, AI will drive cloud platform management. It will ensure that systems deliver services as

expected and proactively identify and resolve challenges before they escalate into issues.

- **Enhanced Developer Productivity:** AI will significantly boost developer productivity, reducing the need for extensive programming to achieve desired outcomes.

- **Instantaneous Process Delivery:** AI will propel process delivery from fast to instantaneous, elevating end-user satisfaction.

- **Accessible AI Solutions:** AI solutions catering to specific use cases like personalization, segmentation, and security will become more accessible and affordable to businesses of all sizes. This democratization of AI technology will foster healthy competition and drive innovation across industries.

Amit: What specific AI-powered cloud services does your company offer, and how do they address the needs of Indian businesses?

Anil: We provide a range of AI-powered cloud services tailored to meet the needs of Indian businesses:

- **Cloud Strategy and Business Case Development:** We assist companies in formulating comprehensive cloud strategies and developing business cases to unlock the full potential of AI-based technologies.

- **Cloud Platform Enablement and Management:** We offer services to enable and manage cloud platforms, specifically designed to support AI-based workloads efficiently.

- **AI-Enhanced Developer Productivity:** Our services include deploying AI-supported tools across the Software Development Life Cycle (SDLC) to boost developer productivity and streamline processes.

- AI-Infused Process Design and Development: We specialize in designing and developing AI-infused processes aimed at increasing revenue and reducing costs for businesses.

- **Data Foundation Enablement:** We help companies establish a solid data foundation to support their AI initiatives, ensuring the availability and management of resources required for successful outcomes.

- **Generative AI-Driven Use Cases:** Our expertise extends to implementing generative AI-driven use cases to support various company initiatives, enhancing innovation and efficiency.

By leveraging our AI-powered cloud services, businesses can establish a robust cloud-based foundation to support their AI-driven initiatives effectively. This enables them to realize tangible value, whether in revenue growth or operational excellence.

> “AI will drive cloud platform management, ensuring that systems deliver services as expected and proactively identifying and resolving challenges before they escalate into issues. This will revolutionize how cloud services are managed, providing a seamless experience for users and enhancing overall system reliability.”

Amit: From your perspective, which industries in India are leading in the adoption of AI-powered cloud services, and what factors are driving this adoption?

Anil: By embracing AI-powered cloud services, industries in India are gaining a competitive advantage, driving innovation, and achieving greater operational efficiency. Key among them are:

- **Banking and Financial Services:** The banking and financial services sector is harnessing AI for various functions including underwriting, anti-money laundering (AML) efforts, and customer service, improving efficiency and compliance.

- **Education:** AI is transforming the education sector by personalizing learning experiences, automating administrative tasks, and improving educational outcomes.

- **Logistics:** AI-powered cloud services are revolutionizing supply chain management, optimizing processes, and improving overall operational efficiency.

- **Payments:** AI-powered services will help in making payments more secure and efficient. These services will help in detecting fraud, and proactively alert end consumers for any issues.

The adoption of AI-powered cloud services is primarily driven by:

- **Data Explosion:** The exponential growth in data generation necessitates advanced

AI solutions to derive insights and drive decision-making effectively.

- **Competitive Edge:** With a vast customer base, delivering competitive services requires leveraging AI-powered services to enhance efficiency and innovation.

- **Business Complexity:** Rising business complexities demand proactive approaches to identify opportunities and challenges. AI-powered services are well-suited to support businesses in navigating these complexities effectively.

Amit: What are some of the main challenges hindering the widespread adoption of AI-powered cloud services in India?

Anil: India encounters challenges akin to those seen globally:

- **Talent Availability:** AI-related cloud services necessitate a skilled workforce well-versed in the AI lifecycle and domain-specific knowledge. Acquiring the right techno-functional talent remains an industry-wide challenge.

- **Risk, Compliance, and Privacy:** Understanding the implications of AI-powered services concerning risk, compliance, and privacy is crucial for widespread adoption. Establishing clear guardrails around AI applications is essential to instill confidence in everyday customers.

- **Data and Knowledge Readiness:** The lack of quality data and knowledge readiness presents a significant barrier to adopting AI-powered cloud services. Access to reliable data and knowledge resources is indispensable for successful AI implementations.

- **Business Case Development:** While the value of AI is universally recognized, crafting a viable business case remains challenging. AI-powered services often demand substantial resources, and quantifying the corresponding revenue or operational upside can be complex.

Addressing these challenges requires collaborative efforts from industry stakeholders. Investments in talent development, robust risk management frameworks, data quality initiatives, and strategic business case development are essential for overcoming these hurdles and fostering widespread AI adoption.

Amit: How do you see the landscape of AI-powered cloud services evolving in India in the coming years, and what role does your company aim to play in this evolution?

> "AI solutions catering to specific use cases like personalization, segmentation, and security will become more accessible and affordable to businesses of all sizes. This democratization of AI technology will foster healthy competition and drive innovation across industries, allowing even small businesses to leverage powerful AI tools."

Anil: In the future, SaaS platforms are expected to offer a wide range of AI-powered services to cater to diverse requirements, such as customer targeting and AI-driven chatbots for customer service. Indian enterprises will leverage these services to differentiate themselves in the market, reduce operational costs, and enhance customer satisfaction.

Our company aims to play a pivotal role in this evolution by leveraging its deep experience across various cloud providers. We are committed to:

- **Enabling AI-powered Cloud Services:** We will empower companies to leverage AI-powered cloud services effectively, enabling them to unlock new capabilities and drive innovation.

- **Creating Data and Knowledge Foundations:** We will assist organizations in establishing robust data and knowledge foundations to support AI-powered use cases, ensuring the availability of reliable resources for informed decision-making.

- **Implementing Effective Cloud Cost Management:** By employing FinOps principles, we will help companies optimize their cloud ecosystems for cost efficiency, ensuring that AI-driven initiatives deliver maximum value.

- **Developing AI-Driven Experiences:** Our expertise will be instrumental in developing and delivering AI-driven experiences that enhance customer engagement and drive business growth.

By playing these key roles, we aim to empower Indian enterprises to harness the full potential of AI-powered cloud services, driving growth, innovation, and competitiveness in the digital era.

Harnessing AI for Cloud Excellence: A Conversation with Hitachi Systems

AI-Powered Cloud Services will be driven by Technological Advancements, Regulatory Developments, and Evolving Market Demands: Hitachi Systems

ANUJ GUPTA,
CEO, Hitachi Systems

In a rapidly evolving technological landscape, AI-powered cloud services are transforming industries by enhancing functionality, improving performance, and automating tasks. Anuj Gupta, CEO of Hitachi Systems, in interaction with Amit Singh, shares his insights on how AI is integrated into cloud services, driving significant impact and innovation across various sectors in India. From infrastructure management to predictive analytics and security, AI's role in cloud computing is profound, offering scalability, cost-effectiveness, and speed. Gupta also addresses the challenges and barriers to widespread adoption, including data privacy concerns, talent shortages, and regulatory issues, while forecasting emerging trends that will shape the future of AI-powered cloud services in India

Amit Singh: How would you define AI-powered cloud services, and what are some examples of these services?

Anuj Gupta: AI-powered cloud services are cloud computing services that integrate artificial intelligence (AI) capabilities to enhance functionality, improve performance, and automate tasks. These services leverage AI algorithms and machine learning techniques to analyze data, extract insights, make predictions, and enable intelligent decision-making. One of the largest advantages is on-demand scalability and quick time to market in real-time.

Key elements of cloud computing include computing, storage, security, databases, applications, and governance. AI is the all-encompassing thread that works on all these elements, becoming a force multiplier. AI-powered cloud applications are hosted on an AI-enabled cloud with enhanced CPU/GPU

computing capabilities and other components.

Large Language Models (LLMs) with billions of parameters can be deployed using large computing capabilities for various applications, including Front End and Sales CRMs. Trust, Risk, and Security Management (TRiSM), including IAM, is crucial, and AI plays a vital role in enabling this in a cloud setup. AI can bring on-demand scalability, better threat protection, and more proactive functioning. Generative AI (GenAI) significantly improves customer interactions by minimizing friction points.

AI-powered cloud computing offers several benefits, including:

- Scalability
- Cost-effectiveness
- Speed and Agility
- Advanced AI Capabilities
- Scalable Storage and Data Processing
- Security and Compliance

Overall, AI-powered cloud computing empowers organizations to harness AI technologies' full potential while benefiting from the scalability, cost-effectiveness, speed, and security of cloud computing platforms.

Examples of AI-powered cloud services include:

- AI-powered Analytics: Large sets of data are analyzed to give customized real-time dashboarding.
- Natural Language Processing (NLP) Services: Useful in retail setups and querying large data sets, including prompt engineering.
- Computer Vision Services: Beneficial for surveillance systems, reducing the need for manual review of digital recordings.
- AI-powered Chatbots: Cloud-based chatbot platforms utilize AI technologies for intelligent virtual assistants in customer service, support, and other applications.
- Predictive Analytics: Leverages AI and machine learning to forecast future outcomes based on historical data.
- AI-driven Data Management: Incorporates AI capabilities for data cleansing, deduplication, classification, and enrichment.

These examples span various applications and industries, providing scalable and cost-effective solutions to leverage AI's power.

> "AI-powered cloud computing empowers organizations to harness the full potential of AI technologies while benefiting from the scalability, cost-effectiveness, speed, and security of cloud computing platforms."

Amit: How is AI transforming cloud services?

Anuj: AI is profoundly transforming cloud services across various domains, enhancing efficiency, accuracy, and innovation. Some key areas of impact include:

- Infrastructure Management and Optimization: AI automates infrastructure provisioning, monitoring, and optimization, ensuring resources are allocated efficiently based on demand. Machine learning algorithms predict resource usage patterns, enabling proactive scaling and optimization to meet performance requirements while minimizing costs.
- Data Analytics and Business Intelligence: AI algorithms analyze vast amounts of data to uncover insights, trends, and correlations that drive informed decision-making. Machine learning models enable predictive analytics, forecasting future trends and behaviors based on historical data.
- NLP and Text Analytics: AI-powered NLP services extract meaning and context from unstructured text data, enabling sentiment analysis, entity recognition, and language translation. Text analytics tools automate tasks like document classification, summarization, and information retrieval.
- Computer Vision and Image Recognition: AI algorithms analyze and interpret visual data, enabling applications like object detection, image classification, and facial recognition. Computer vision services automate tasks such as quality control in manufacturing and medical image analysis in healthcare.
- Speech Recognition and Voice Assistance: AI-driven speech recognition technologies convert spoken language into text, enabling hands-free interaction with devices and applications. Voice assistants like Amazon Alexa and Google Assistant provide personalized assistance and perform tasks using natural language understanding.
- Security and Threat Detection: AI enhances security by detecting and mitigating cyber threats in real time through anomaly detection, behavior analysis, and pattern recognition. Machine learning algorithms identify and respond to security incidents faster, minimizing the impact of breaches and unauthorized access.
- Predictive Maintenance and IoT Analytics: AI analyzes IoT sensor data to predict equipment failures and maintenance needs, optimizing asset performance and reducing downtime. Predictive maintenance models improve operational efficiency by scheduling maintenance activities based on equipment health and usage patterns.
- Improved Automation: AI-powered automation

streamlines repetitive tasks, such as provisioning resources, managing workflows, and troubleshooting issues, reducing manual effort and errors. Robotic process automation (RPA) tools automate business processes by mimicking human actions, improving productivity and efficiency.

- Predictive Analytics: AI enables predictive analytics by identifying patterns and trends in data, forecasting future outcomes, and recommending actions to optimize business processes.
- Cost Optimization: AI-driven cost optimization tools analyze cloud usage patterns and recommend strategies to optimize resource utilization, minimize waste, and reduce costs.

Amit: Can you provide examples of use cases where AI-powered cloud services have demonstrated significant impact or innovation?

Anuj: We have many examples from various industries demonstrating significant impact and innovation. Here are a few notable ones:

- Generative Video Advertising: Coca-Cola's advert "Masterpiece" is an excellent example. This critically acclaimed video brings famous works of art to life, seamlessly integrating AI-augmented animation with live action. It was created with OpenAI, using their DALL-E2 generative image model and ChatGPT. This initiative showcases how AI can empower creativity and transform advertising.
- Front-End CRM Solution: In the retail sector, startups have developed AI-enabled business automation platforms and applications to enhance customer experience. These solutions involve integrating AI and GenAI for superior quality, reduced costs and drastically reduced customer response times in a highly secured environment. GenAI enables a quick synopsis of customer interaction history, allowing agents to resolve issues in real time. It includes image recognition for item replacement/return and a very efficient ticket management system.

Amit: How are AI-powered cloud services transforming specific industries in India, such as healthcare, finance, agriculture, manufacturing, and retail?

Anuj: AI-powered cloud services are transforming various industries in India, including healthcare, finance, agriculture, manufacturing, and retail, by driving innovation, improving efficiency, and enabling new capabilities. Here's how AI is impacting each of these sectors:

Healthcare:

- Medical Imaging and Diagnostics
- Clinical Decision Support
- Remote Patient Monitoring

> "AI-powered cloud services landscape in India will continue to evolve rapidly, driven by technological advancements, regulatory developments, and evolving market demands. Organizations that embrace these emerging trends and leverage AI technologies effectively will gain a competitive edge and drive innovation in their respective industries."

Finance:

- Fraud Detection and Risk Management
- Algorithmic Trading
- Customer Service and Personalization
- Digital Lending

Agriculture:

- Crop Monitoring and Management
- Predictive Analytics for Yield Optimization
- Supply Chain Optimization
- Food Warehouse Management

Manufacturing:

- Predictive Maintenance
- Product Design
- Quality Control and Defect Detection
- Process Optimization

Retail:

- Personalized Marketing and Customer Recommendations
- Inventory Management
- In-Store Analytics and Customer Experience

In India, companies like Myntra, Tata Steel, Hero MotoCorp, and CreditVidya are leveraging AI to drive significant improvements in their operations.

Amit: What are the main challenges or barriers hindering the widespread adoption of AI-powered cloud services in India?

Anuj: The widespread adoption of AI-powered cloud services in India faces several challenges and barriers, including:

- Data Privacy and Security Concerns: Ensuring data privacy and security is crucial, especially with the evolving regulatory landscape.
- Talent Shortages and Skills Gap: There is a shortage of skilled AI and cloud professionals in India, hindering the ability to develop and deploy AI-powered solutions effectively.
- Infrastructure and Connectivity Issues: While cloud services require robust infrastructure and connectivity, certain regions in India still lack reliable internet access and infrastructure, limiting the reach of cloud services.
- Regulatory and Compliance Challenges:

Navigating the regulatory landscape and ensuring compliance with data protection and privacy laws can be complex for organizations adopting AI-powered cloud services.
- Cost and ROI Considerations: The initial investment required for implementing AI-powered cloud services and the uncertainty around return on investment (ROI) can be a barrier for some organizations, particularly smaller businesses.
- Change Management and Organizational Culture: Adopting AI-powered cloud services often requires significant changes in organizational culture, processes, and workflows. Resistance to change and a lack of awareness or understanding of the benefits of AI can hinder adoption.

Amit: What emerging trends do you foresee in the AI-powered cloud services landscape in India, and how can organizations stay ahead of the curve?

Anuj: The AI-powered cloud services landscape in India is evolving rapidly, driven by technological advancements, regulatory developments, and market demands. Emerging trends in this landscape include:
- Hybrid and Multi-Cloud Strategies: Organizations are adopting hybrid and multi-cloud strategies to leverage the strengths of different cloud providers and optimize their AI-powered cloud services. This approach allows for greater flexibility, scalability, and cost efficiency.
- Edge Computing and AI at the Edge: As the demand for real-time processing and low-latency applications increases, edge computing is gaining prominence. AI-powered edge computing enables organizations to process and analyze data closer to the source, reducing latency and improving performance.
- AI-Driven Automation and Orchestration: AI-powered automation tools are becoming more sophisticated, enabling organizations to automate complex tasks, workflows, and processes. AI-driven orchestration helps optimize resource allocation, improve efficiency, and enhance overall performance.
- Industry-Specific AI Solutions: There is a growing trend toward developing industry-specific AI solutions tailored to the unique needs and challenges of different sectors. These solutions leverage domain-specific knowledge and data to deliver more targeted and effective AI-powered cloud services.
- AI and Cybersecurity Integration: As cyber threats become more sophisticated, integrating AI with cybersecurity solutions is becoming essential. AI-powered threat detection, anomaly detection, and incident response capabilities help organizations protect their data and infrastructure from cyberattacks.
- Explainable AI and Ethical AI: With the increasing use of AI in critical applications, there is a growing emphasis on explainable AI and ethical AI practices. Organizations are focusing on ensuring transparency, fairness, and accountability in their AI-powered cloud services.

To stay ahead of the curve, organizations should:
- Invest in Talent and Skills Development: Building a skilled workforce with expertise in AI and cloud technologies is crucial for staying competitive. Organizations should invest in training and development programs to upskill their employees.
- Foster a Culture of Innovation: Encouraging a culture of innovation and experimentation can help organizations stay at the forefront of technological advancements. Embracing new ideas and approaches to problem-solving can drive continuous improvement and innovation.
- Collaborate with Technology Partners: Partnering with technology providers, startups, and research institutions can help organizations access the latest AI and cloud innovations. Collaborative efforts can accelerate the development and deployment of AI-powered cloud solutions.
- Prioritize Data Privacy and Security: Ensuring robust data privacy and security measures is essential for building trust with customers and complying with regulatory requirements. Organizations should prioritize data protection and invest in advanced security solutions.
- Stay Informed About Regulatory Developments: Keeping abreast of regulatory changes and developments in the AI and cloud computing space is crucial for ensuring compliance and staying ahead of potential challenges.
- Focus on Customer-Centric Solutions: Understanding customer needs and delivering tailored solutions can help organizations differentiate themselves in the market. Organizations should prioritize customer experience and continuously innovate to meet evolving demands.

By addressing these challenges and regulatory issues, India can unlock the full potential of AI-powered cloud services, drive innovation, and accelerate digital transformation across various sectors of the economy.

Overall, the AI-powered cloud services landscape in India will continue to evolve rapidly, driven by technological advancements, regulatory developments, and evolving market demands. Organizations that embrace these emerging trends and leverage AI technologies effectively will gain a competitive edge and drive innovation in their respective industries.

Transforming Cloud Services with AI: Ravi Maguluri Discusses Sify Technologies' Innovative Approach

RAVI MAGULURI,
CTO of Cloud and Digital Services,
Sify Technologies

In this insightful interview, Amit Singh sits down with Ravi Maguluri, CTO of Cloud and Digital Services at Sify Technologies, to explore the transformative impact of artificial intelligence on cloud services in India. Ravi discusses how AI is revolutionizing every aspect of cloud service delivery, from customer selection to performance optimization. He also highlights Sify Technologies' cutting-edge AI-powered solutions and addresses the challenges and prospects of AI adoption in the Indian cloud services landscape

Amit Singh: How do you envision AI transforming cloud services in India? What are the elements of cloud services that AI is transforming?

Ravi Maguluri: AI is transforming 'everything' about cloud services. If we look at it from a lifecycle perspective, of how customers choose, configure, manage, monitor, and optimize the cloud services. While it was all about automation that started and continually improved the cloud services offerings, there is massive amount of data generated in the cloud services delivery that is now becoming the foundation for the application of AI and ML for qualitatively enhancing every aspect of the cloud service delivery.

Amit: What specific AI-powered cloud services does your company offer, and how do they address the needs of Indian businesses?

Ravi: We offer InfinitFSO or Full Stack Observability a holistic service that eliminates noise and predicts the probable root cause of an availability or performance problem of an IT service up to 70% to 90% faster compared to traditional means.

Amit: From your perspective, which industries in India are leading in the adoption of AI-powered cloud services, and what factors are driving this adoption?

Ravi: The arrival of Generative AI and the foray of all major technology vendors like Microsoft, SAP, ServiceNow, and many more into offering AI-powered services has generated enough enthusiasm across the board. Every business wants to do something with AI and the concerned teams are chasing potential success criteria for envisioning and budgeting the POCs/Projects.

Amit: What are some of the main challenges hindering the widespread adoption of AI-powered cloud services in India?

Ravi: The cost of adoption is the primary challenge. And then due to skill shortage and apprehension of the timelines and lack of assured success, customers prefer proven readymade solutions, little receptive to the fact that each business runs on its tacit knowledge and any insights, or wisdom generated at some other company may not necessarily be applicable straight away. The mindset to create solutions on AI/ML frameworks is found rarely.

Amit: How do you see the landscape of AI-powered cloud services evolving in India in the coming years, and what role does your company aim to play in this evolution?

Ravi: Transforming the stakeholder experience inside or outside the business is the priority. We will continue to enhance the engagement layer with the development of enterprise copilots and help businesses make better business decisions with AI under the hood by embedding AI for decision support by way of insights and foresight. We are on the lookout for developments in the area of AI native solutions that are emerging and how they may be harnessed for business use.

Milestone Systems Launches Milestone Kite in India at New Experience Center

Milestone Systems, a leader in data-driven video technology, has opened its first Experience Center in Bangalore, India. This facility will showcase advanced video technologies across various industries and introduce the company's new cloud-based video management software, Milestone Kite.

The Experience Center allows visitors to explore cutting-edge video and sensor technologies, from manufacturing automation to data center security and healthcare safety. The launch event also marked the debut of Milestone Kite in India. This scalable Video Surveillance as a Service (VSaaS) software is compatible with over 25,000 devices and is accessible globally. It simplifies security management for businesses, enabling them to focus on core operations with minimal infrastructure requirements.

Malou Toft, Vice President for APAC at Milestone Systems, emphasized the company's commitment to supporting India's Viksit Bharat 2047 initiative. The center aims to demonstrate the versatility of video applications beyond traditional surveillance, offering hands-on experiences with technologies like heatmapping, crowd management, and AI-powered analytics.

Milestone Kite is particularly suited for businesses with multiple locations and limited IT resources. It integrates various value-added services, from visitor tracking to AI-driven analytics, enhancing flexibility and functionality.

The opening of the Experience Center coincides with significant economic development in India, as the country aims to become a developed economy by 2047. The Danish Ambassador to India, Freddy Svane, highlighted the strong relationship between Denmark and India, noting the potential for Danish companies to expand in India's dynamic economy.

Malou Toft added that Milestone Systems aims to support economic progress and societal well-being by focusing on key sectors such as automobile manufacturing, smart cities, and critical infrastructure. The company plans to collaborate with diverse stakeholders to contribute to India's prosperous future.

This is Milestone Systems' third Experience Center in the Asia Pacific, further expanding its presence in India, following the opening of offices in Mumbai, Delhi, and Bangalore.

GoTo's India Partner Summit 2024 Highlights Channel Expansion and Joint Innovation

GoTo, renowned for simplifying IT management, support, and business communications through its flagship products like GoTo Resolve and Rescue, hosted its India Partner Summit to celebrate significant channel growth and innovation. Over the past year, GoTo has formed partnerships with more than 2,000 new partners in India, contributing to its global network of over 14,000 partners.

The summit showcased upcoming features for GoTo's solutions, such as GoTo Resolve's self-healing alerts and AI-powered custom-script writing, which were developed based on partner feedback. Attendees also learned about GoTo Partner Incentives, ecosystem challenges, and the new 30-day lead-generation program aimed at driving business growth and enhancing partnerships.

Yvette McEnearney, Senior Director of Channel Sales, APAC, emphasized the importance of open dialogue with partners, stating, "These events foster invaluable connections and collaboration, helping us grow together. The remarkable growth we've seen in the past year sets a strong foundation for continued success into 2024."

Mohan Muthuraj, Vice President of India Business at Sonata Software, praised GoTo's reliability and partner-centric initiatives, noting their effectiveness during the remote work challenges of the pandemic. He highlighted GoTo's powerful products and marketing strategies as key factors in their successful collaboration.

Phanindra Kumar, Founder and Sales Head at F-Grade Global Services, commended GoTo's integration capabilities and commitment to regular product upgrades, which ensure adaptability and customer satisfaction. These attributes, he said, strengthen trust in GoTo's offerings and partnerships.

GoTo also announced the regional winners of its 2023 Partner Awards: Sonata Software as Top Partner of 2023, Digital Track for Top Deal of 2023, and Techigent as Top Emerging Partner

Introducing Databricks LakeFlow: A Unified Solution for Data Engineering

Databricks, the Data and AI company, has launched Databricks LakeFlow, a comprehensive solution designed to simplify and unify all aspects of data engineering, from ingestion to transformation and orchestration. LakeFlow enables data teams to efficiently ingest data at scale from databases like MySQL, Postgres, and Oracle, as well as enterprise applications such as Salesforce, Dynamics, SharePoint, Workday, NetSuite, and Google Analytics. Additionally, the new Real Time Mode for Apache Spark™ supports ultra-low latency stream processing.

LakeFlow automates the deployment, operation, and monitoring of data pipelines at scale in production, featuring built-in CI/CD support and advanced workflows that include triggering, branching, and conditional execution. Integrated data quality checks and health monitoring systems, such as PagerDuty, ensure reliability. This solution simplifies the creation and operation of production-grade data pipelines, even for the most complex data engineering tasks, meeting the increasing demand for reliable data and AI.

Addressing Data Engineering Challenges

Data engineering is crucial for democratizing data and AI within businesses but remains a challenging field. Data teams often deal with siloed, proprietary systems, requiring complex connectors, and intricate data preparation logic. Operational disruptions due to failures and latency spikes can lead to customer dissatisfaction. Deploying and monitoring pipelines involves using disparate tools, complicating the process. Current solutions are often fragmented and incomplete, resulting in low data quality, reliability issues, high costs, and a backlog of work.

LakeFlow simplifies these challenges by providing a unified experience built on the Databricks Data Intelligence Platform, with deep integrations with Unity Catalog for governance and serverless compute for efficient and scalable execution.

Key Features of LakeFlow

- LakeFlow Connect: Enables scalable data ingestion from various sources using native connectors for databases like MySQL, Postgres, SQL Server, and Oracle, as well as enterprise applications like Salesforce, Dynamics, SharePoint, Workday, and NetSuite. These connectors are integrated with Unity Catalog for robust data governance and utilize the efficient capabilities of Arcion, acquired by Databricks in November 2023, to support batch and real-time analysis.

- LakeFlow Pipelines: Automates real-time data pipelines using Databricks' Delta Live Tables technology, allowing data transformation and ETL in SQL or Python. It supports low-latency streaming without code changes, unifies batch and stream processing, and offers incremental data processing for optimal performance. This feature simplifies complex data transformations, making them easy to build and operate.

- LakeFlow Jobs: Automates workflow orchestration across the Data Intelligence Platform, handling scheduling of notebooks and SQL queries, ML training, and automatic dashboard updates. It provides enhanced control flow capabilities and full observability to detect, diagnose, and mitigate data issues, increasing pipeline reliability. LakeFlow Jobs centralizes the deployment, orchestration, and monitoring of data pipelines, helping data teams meet their data delivery commitments.

Lenovo Introduces ThinkSystem V4 in Collaboration with Intel to Boost AI-Driven Performance

Lenovo has unveiled the Lenovo ThinkSystem V4 lineup, leveraging Intel® Xeon® 6 processors, to enhance AI capabilities while tailoring solutions to meet diverse business workload requirements. This portfolio includes AI-driven solutions aimed at facilitating seamless integration of AI into workflows, along with purpose-built servers optimized for maximum performance and efficiency across specific workloads.

Furthermore, Lenovo's latest AI-powered Systems Management solutions utilize Generative AI to automate deployment and configuration processes, enhancing management efficiency across distributed computing networks. By unlocking enterprise-specific data insights and supporting operational decision-making, Lenovo aims to bolster productivity while ensuring data protection.

Sumir Bhatia, President of Lenovo ISG AP, emphasized the collaboration between Lenovo and Intel to democratize AI accessibility, making it inclusive across various developmental stages and applications. With a vision of 'Smarter AI for All,' the new infrastructure offers unmatched performance and accessibility, enabling businesses to leverage hybrid AI infrastructure effectively.

Amit Luthra, MD – India, Lenovo ISG, highlighted the increasing adoption of AI in India and Lenovo's commitment to offering purpose-built AI solutions to meet customer demands. The Think System portfolio is engineered to help Indian businesses harness AI's transformative potential, driving efficiency, productivity, and informed decision-making while safeguarding critical information.

Lenovo's ThinkSystem V4 portfolio is designed to cater to diverse business needs, offering advanced performance, efficiency, and management capabilities. The new servers optimized for rack density and massive transactional data aim to maximize processing performance for enterprises, cloud service providers (CSPs), high-performance compute, and telcos.

The ThinkSystem SD520 V4 server boasts extreme rack density and efficiency, providing ultra-dense processing capabilities ideal for compute-intensive transactional workloads. On the other hand, the ThinkSystem SR630 V4 is tailored for cloud-scale, Telco 5G Core, and ecommerce workloads, delivering up to 42% faster media transcoding.

To address security concerns, Lenovo's ThinkSystem servers prioritize security, offering protection against sophisticated threats and ensuring business continuity. The incorporation of AI-powered code inspection for firmware enhances security measures out of the box.

Lenovo also extends its liquid cooling innovation with Neptune liquid-cooling technology, reducing power consumption while meeting the high performance demanded by AI. This technology is available across a range of servers, enabling businesses to achieve computing power without compromising efficiency.

With the right mix of AI solutions from edge to cloud, Lenovo aims to empower businesses of all sizes to adopt AI quickly and cost-effectively. The introduction of Lenovo AI Advisory and Professional Services further supports businesses in deploying AI solutions at scale.

The enhanced Systems Management solutions powered by AI aim to reduce complexity in infrastructure management, offering predictive failure analytics and proactive issue resolution capabilities.

Lenovo's commitment to innovation extends across smart devices, intelligent infrastructure, and complete services, enabling Smarter AI for All with simplified deployment and enhanced security features across the computing spectrum.

Channel Point

Embracing the AI-Cloud Convergence

As we delve into the May 2024 issue of ITPV magazine, it's impossible to overlook the profound impact of the convergence between artificial intelligence (AI) and cloud computing on India's business landscape.

This isn't just a fleeting trend—it's a fundamental shift that's reshaping the way businesses operate, innovate, and compete.

In sectors like healthcare, finance, agriculture, and manufacturing, the rapid adoption of AI-driven cloud services is propelling efficiency and innovation to unprecedented levels. Businesses are leveraging these technologies to streamline operations, enhance customer experiences, and secure competitive advantages, all while navigating the complexities of a digital-first world.

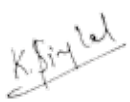
However, this transformation is not without its hurdles. Data privacy concerns, talent shortages, regulatory barriers, and infrastructure limitations present significant challenges. Addressing these issues is crucial to unlocking the full potential of AI-powered cloud services. As the digital economy continues to grow, investments in skill development and technological infrastructure will be key.

Looking ahead, the future of AI-powered cloud services in India is undeniably bright. Increased investments, improved data privacy measures, and the adoption of multi-cloud and hybrid strategies are set to drive further growth and innovation. As businesses embrace these technologies, AI and cloud computing will play a pivotal role in shaping India's economic future.

Harnessing the power of AI through cloud platforms will not only revolutionize industries but also ensure that Indian businesses remain at the forefront of global innovation.

Stay tuned as we explore this exciting intersection and its implications for the future.

Regards



KALPANA SINGHAL, Editor
(E-mail: kalpana@techplusmedia.co.in)

TECHPLUS MEDIA

EDITOR: KALPANA SINGHAL
CONTENT HEAD: Amit Singh
CONSULTING EDITOR: Rajneesh De
NEWS ANALYST: Ishita Gupta
CORRESPONDENT: Bhawna Thapliyal
NEWS REPORTER: Anindita Majumder, Urmi Saha

INTEGRATED MARKETING COMMUNICATION:
Arunim Agrawal, Mamta Kapoor

ASSOCIATE ANALYST
Shaithra S

SALES:
Anushikha Singh | Pratap Jana

PRODUCTION HEAD:
Aji Kumar

WEBSITE:
Gaurav Rana

PROMOTION:
Amit Pandey, Nikita Gurung

CIRCULATION:
Pratap Ram

FINANCE:
Inder Pal

HEAD OFFICE:
370A, Sant Nagar, East of Kailash, New Delhi
Tel: 41625763, 26237405, 41620042
Email - kalpana@techplusmedia.co.in

MARKETING OFFICE:
10 UF, West Wing, Raheja Tower,
MG Road, Shanthala Nagar, Ashok Nagar,
Bengaluru, Karnataka-560001

Delhi: 91-8178321837 | **Mumbai:**91-98997 01316
Kolkata & Guwahati: 91-9331072026
Bangalore: 91-8851119532

OWNED, PRINTED & PUBLISHED BY ANUJ SINGHAL Printed at Modest Graphics Pvt. Ltd., C 52-53, DDA Shed, Okhla Industrial Area, Phase - I, New Delhi-20, Place of Publication: 370A, 2nd Floor, Sant Nagar, East of Kailash, New Delhi-110065, Editor- Anuj Singhal

PANTUM
प्रिंटिंग के लिए नया युग

Pantum India Product Line

Business is Complicated, Printing Should be Simple

Vibrant 18 Series

Elite Series

PT-L280 Series

PT-L380 Series

PT-B680 Series

Simple&Smart Series

Simple&Smart Series

Mighty Series

4S Efficiency Series

Max Series

PANTUM SERVICE TOLL FREE NO.: 18003098240

WWW.PANTUM.IN

SALES REGION	PHONE NOS.	SALES REGION	PHONE NOS.
West Bengal & North East	98302 28532	Bihar & Jharkhand	9334317035

Know more on @PantumIndia

Postal Registration No. - **DL(S) 01/3377/2019-21 Posting Date - 13-14, 27-28**
Registered with Registrar of Newspapers of India under RNI No. **DELENG/2010/32787**

OWNED, PRINTED & PUBLISHED BY ANUJ SINGHAL, Place of Publication: 370A, 2nd Floor, Sant Nagar, East of Kailash, New Delhi-110065, EDITOR: Anuj Singhal