

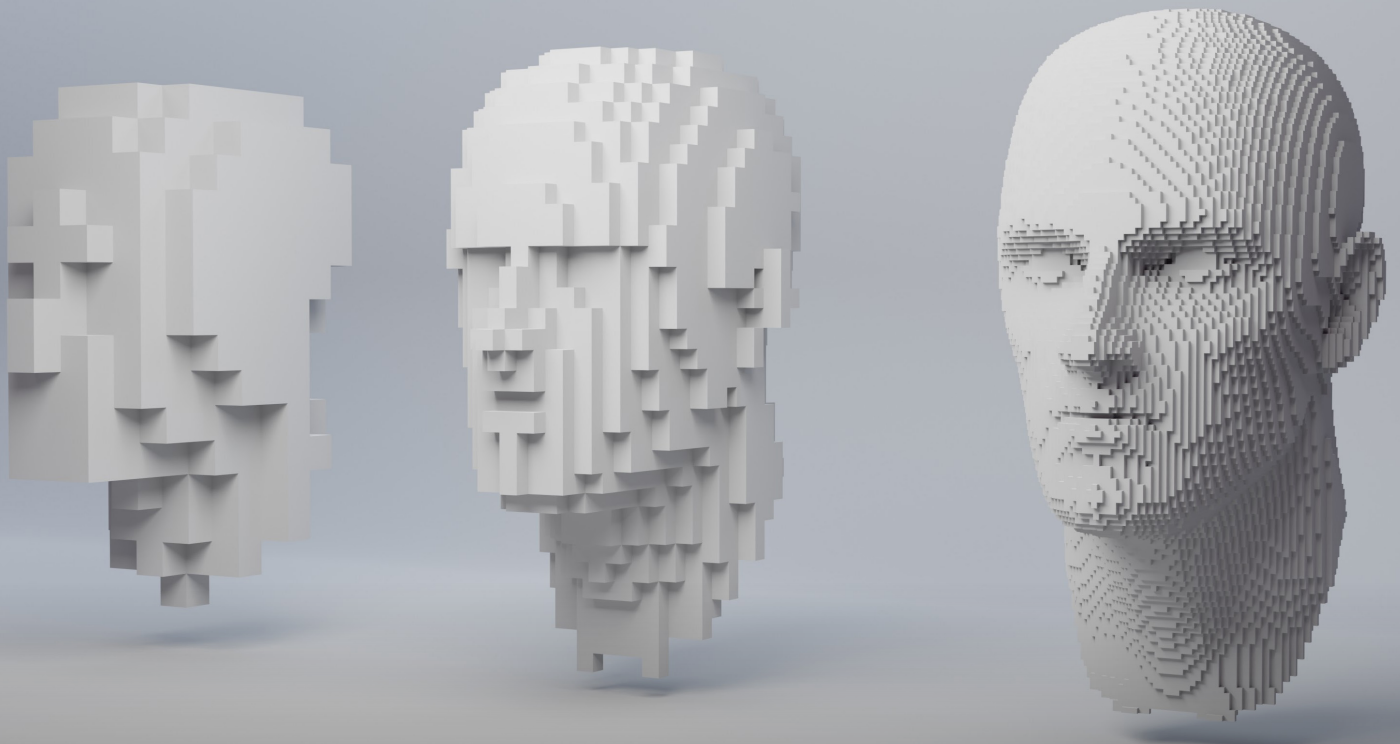


CXO FOCUS

AI MARKET EVOLUTION: DATA AND INFRASTRUCTURE TRANSFORMATION THROUGH AI

6 TAKEAWAYS FROM THE NUTANIX STATE OF
ENTERPRISE AI REPORT

NOVEMBER 2023



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The Nutanix State of Enterprise AI Report, shines a light on AI adoption in enterprises, the challenges they face, and the future trajectory of this game-changing technology.”

Artificial Intelligence (AI), a term once relegated to the realms of science fiction, is today at the heart of an unprecedented revolution in business technology. From nimble start-ups to established global powerhouses, businesses are hailing AI as the next frontier of digital transformation, promising competitive advantages like never before.

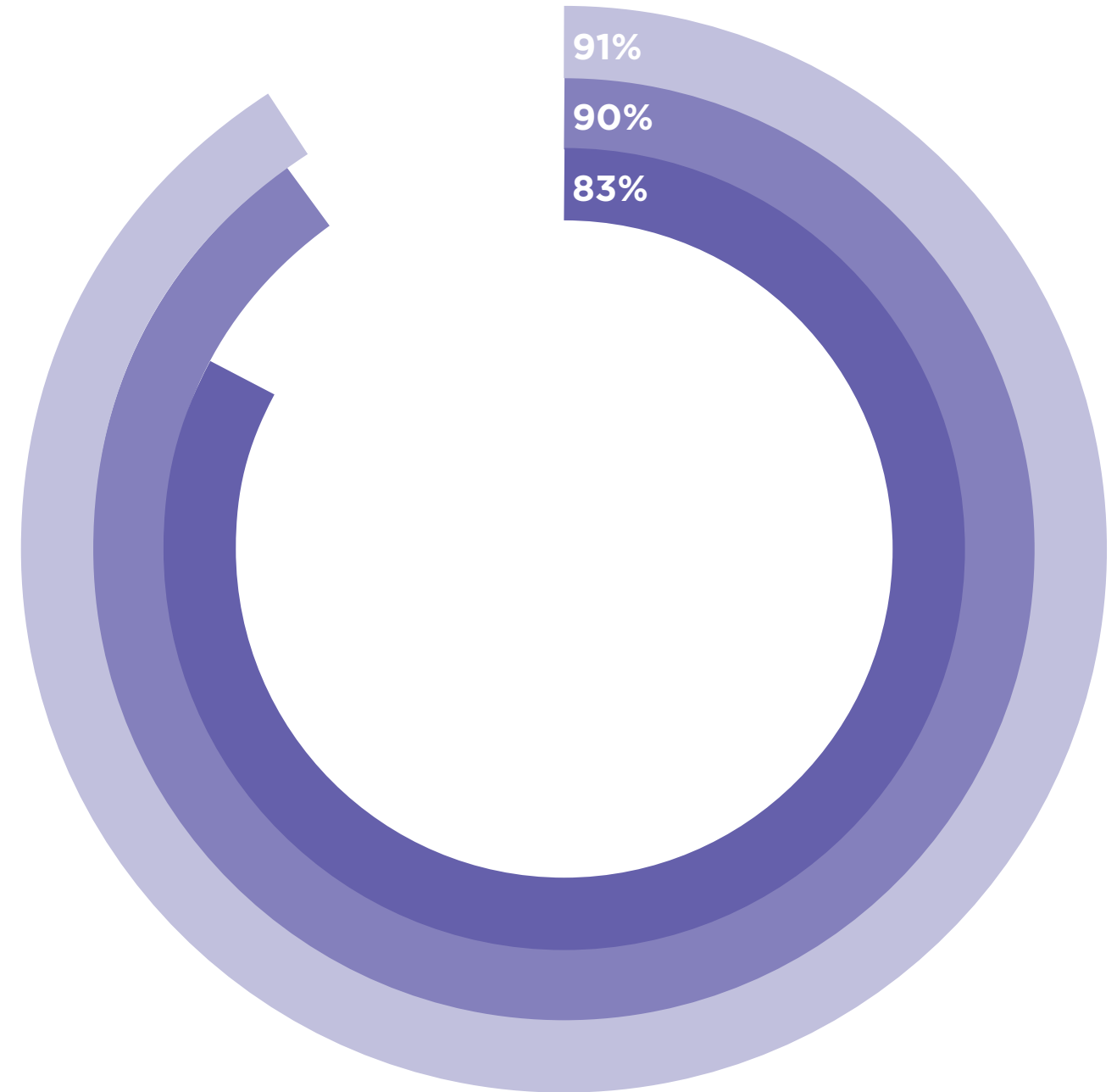
To understand how AI is being used in enterprise IT, Nutanix commissioned U.K. research firm Vanson Bourne to survey 650 global IT, DevOps,

and Platform Engineering decision-makers on their enterprise AI technology strategy and adoption. The study, The Nutanix State of Enterprise AI Report, shines a light on AI adoption in enterprises, the challenges they face, and the future trajectory of this game-changing technology.





Top AI trends



1. AI adoption is ubiquitous, but nascent

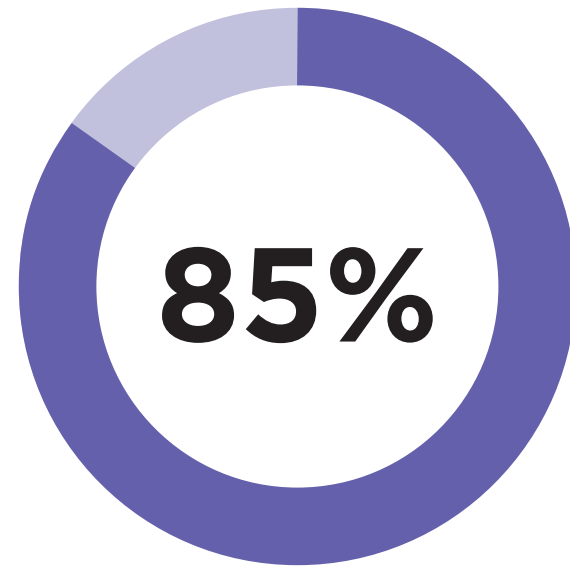
The enthusiasm for AI is palpable. An astonishing 90% of organizations view AI as a priority. Yet, the path to AI integration is riddled with uncertainties. In the absence of strategic best practices or established frameworks, many are working their way through a maze as they seek to identify the most suitable IT environment for AI workloads or which AI applications align best with their business needs.

Understanding the integration of AI into contemporary business operations demands that you know its current uses and anticipated evolution. According to the report, enterprises predominantly employ AI in generative video, text, and image applications, bolstering their virtual assistance and customer support functions.

Following closely are AI-anchored solutions for fraud detection, cybersecurity, image and speech recognition, and computer vision.

When we shift our lens to deployment environments, the figures show an apparent inclination towards private cloud or on-premises data center environments. Data locality considerations, regulatory compliance, and performance metrics likely shape such choices. A peek into the underlying compute environments reveals a balanced AI application deployment across virtual machines (VMs) and containers, highlighting AI's versatility across myriad IT environments.

- agree their IT infrastructure needs to be improved to support AI
- considers AI a priority
- plan to increase investment in edge strategy to support AI



respondents say their organization plans to increase investments in IT infrastructure modernization

2. AI a primary driver in IT modernization and data mobility requirements

Al's insatiable appetite for data requires that businesses have a cohesive data strategy with effective processes and workflows that are secure and easy to access. Most respondents (91%) are clear that to meet expanding data requirements, there needs to be a long-term investment in IT infrastructure modernization to support and scale AI workloads. Notably, 85% of respondents say their organization plans to increase investments in IT infrastructure modernization over the next 1-3 years to support AI workloads.

But to support AI workloads, there needs to be seamless data mobility across data centers, cloud, and edge environments, which comes at a cost. Even though many businesses are already on the path toward hybrid and multicloud IT architectures, the distributed edge still lags

behind, relatively speaking. Change is afoot though, as 93% of respondents believe in deploying an edge strategy to support AI plans, and 83% are willing to increase investments in an edge strategy over the next 1-3 years.

The winners here are the early adopters. However, it's positive that enterprises understand the importance of infrastructure modernization to support AI. Still, challenges remain in the design and deployment of this infrastructure. Notably, many businesses are considering AI infrastructure and application upgrades. Respondents, meanwhile, are clear on what they believe the key drivers are, namely data security (53%), infrastructure resilience and uptime (52%), infrastructure management at scale (51%), and infrastructure automation (50%).

3. AI skills remain a concern: investment is coming

Every technological evolution brings with it the imperative for new competencies. While the excitement over AI technologies like generative AI is palpable, realizing its full benefits will take time as organizations still need to determine what new skills and capabilities the workforce will need.

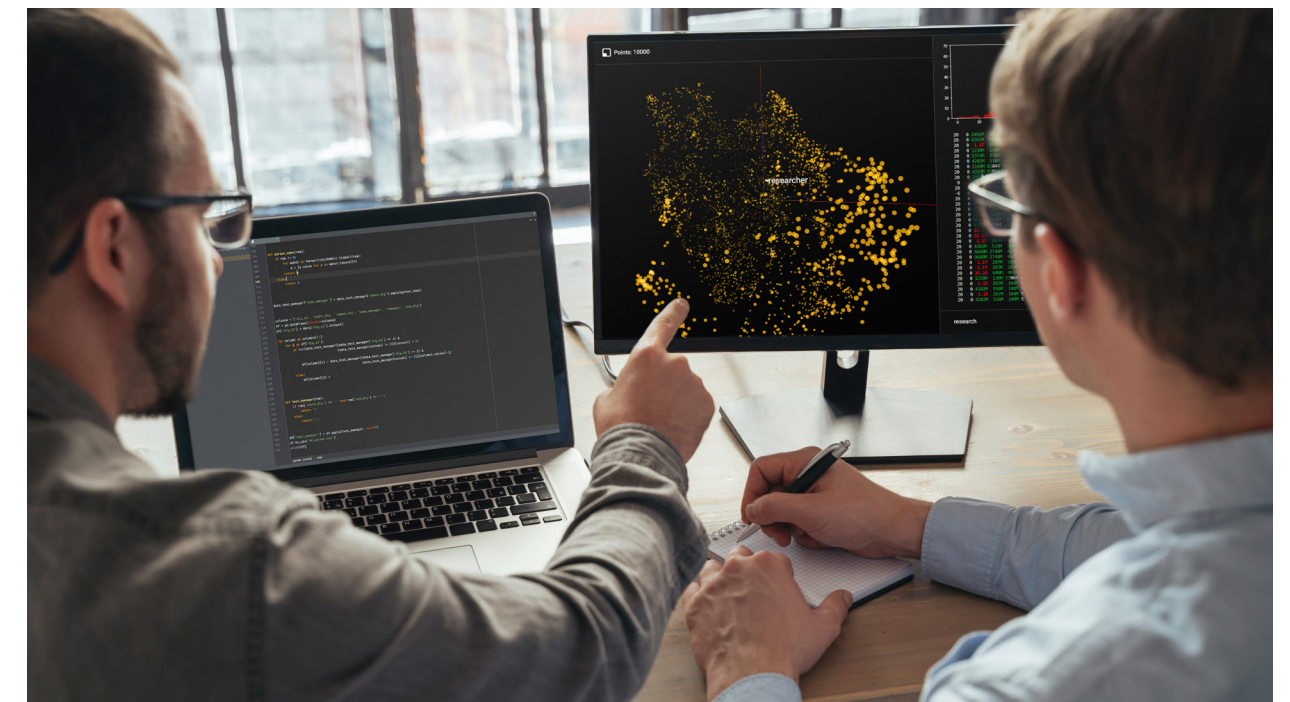
Indeed, 84% of businesses plan to increase investments in their data science and engineering teams over the next 1-3 years. The main areas they are setting their sights on are generative AI and prompt engineering (45%), and data science/data

analytics (44%), which were identified as the top two areas needing more AI skills over the next year.

Another notable finding is that 90% of respondents will look to purchase existing AI models or leverage existing open-source AI models when building AI applications, and only 10% say they plan to develop their own. Many see the benefit of leveraging existing models as a way to maximize resources and accelerate time to market.



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4. Sustainability and ESG are not off the AI table

Undeniably, ESG has cemented its role as a pressing business imperative at this time. Survey respondents agree and have ranked ESG reporting as a critical area requiring AI skills development, ranking it above R&D and product development.

What we can take from this is that as ESG becomes a priority, companies are looking for

effective ways to improve reporting, adhere to regulatory and compliance requirements, and even optimize IT operations. One way they believe they will achieve this is through the effective and responsible use of AI - bearing in mind that the systems required to run compute- and GPU-hungry AI algorithms and workloads are themselves power and resource-hungry.

5. Data security, data quality, and data governance still raise warning bells

In the data realm, security remains a persistent concern. This is abundantly clear from the report, in which respondents cite data security and data quality as their first and second most important considerations when running or planning AI workloads. To put this into context, cost ranks a mere 10th, and rightly so. AI applications and services depend on data, models, and infrastructure - all of which need to be secured.

Data governance also ranks highly when looking at businesses' demands of their AI technologies. We can expect that AI tools will move data governance from the "afterthought" table to a position of primary importance. The reason is simple: AI relies on consistent data access, quality, and scalability. This underscores the importance of protecting and securing data for any AI workload.

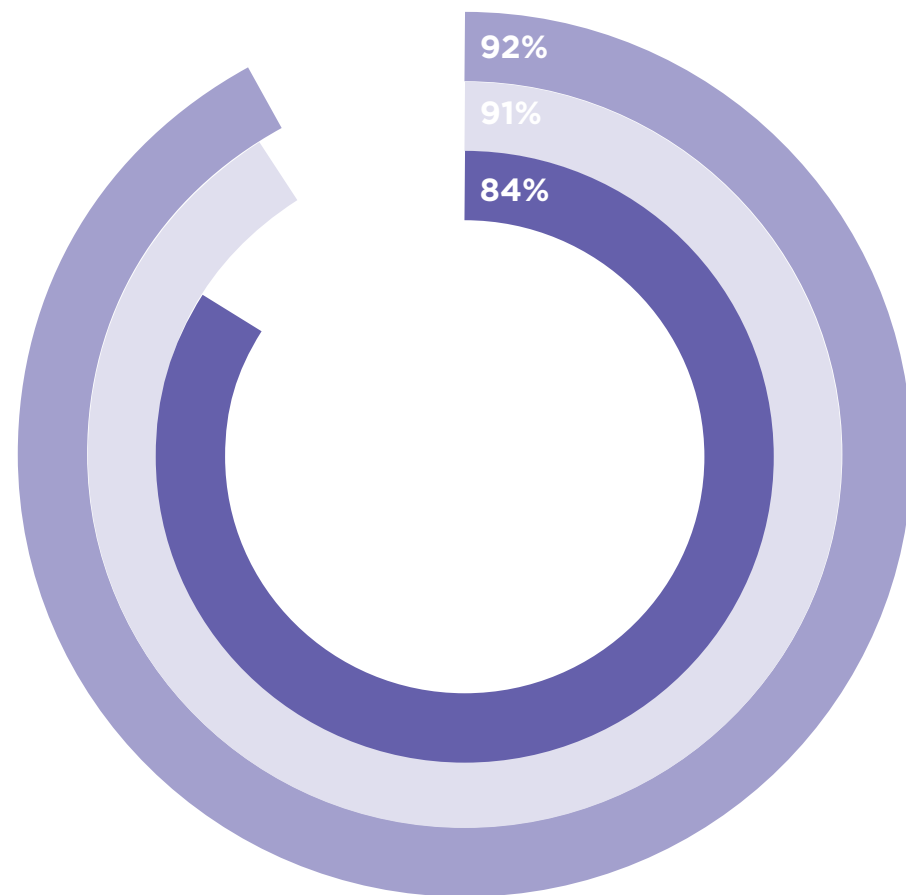


6. Cost Roadblocks will start to emerge

Initial forays into AI, as the report suggests, often resemble a honeymoon phase in which the cost of AI tools isn't a factor if they can be seen to be running ahead of the AI curve. However, all honeymoons must end, and 90% of respondents already recognize that using AI applications will increase day-to-day IT and cloud spending.

Looking ahead, AI will need to be held to the same financial rigor as other IT line items, especially given that IT budgets are not as generous as they once were. This impending scenario underscores the necessity to justify AI's costs, pinpoint infrastructure options that promise optimal TCO, and strategically plan AI investments for the long haul.

Predicted costs of AI tools



- expect IT costs to increase due to AI applications and services
- expect to increase their investment to modernize their IT infrastructure to support AI
- expect cloud costs to increase due to AI



Enterprises that succeed will be those that don't just adopt AI but weave it intrinsically into their business fabric, recognizing its potential and challenges alike.”

Implementing enterprise AI is a long-haul journey

The road to AI is paved with good intentions, but it's not a journey with a single destination, and it's too early to assert a right or wrong approach to infrastructure decisions.

We can already see that AI is emerging not merely as a tool but as a transformative force that is reshaping industries. Its intertwining with core business strategies and operations is undeniable. Yet, as this survey underscores, the path to AI maturity demands not just

financial investment but also discernment in infrastructure choices, talent cultivation, and long-term strategy.

Enterprises that succeed will be those that don't just adopt AI but weave it intrinsically into their business fabric, recognizing its potential and challenges alike. As the age of AI dawns, businesses stand on the cusp of unprecedented innovation and transformation.



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