THE NEW SCHOOL PARSONS

AI Infrastructure Isn't Broken Access Is!

What **44** industry leaders reveal about cost, talent, and capability gaps for startups

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Why you're receiving this report

Because you participated in our survey on access to AI infrastructure a few months ago.
We are here to share what other practitioners like you collectively surfaced — what works, what breaks, and where the system feels uneven.

Click here for **Survey Link**

What this report gives you:

Some surprising insights, Some reaffirmed patterns	**Patterns across 44 leaders,** not individual opinions	**Actionable signals for teams,** vendors, and policymakers

Introduction

Defining the AI Adoption Challenge

The Promise vs. The Reality. While Artificial Intelligence promises to reshape industries, the path from potential to production is obstructed by significant, often underestimated barriers. To move beyond the hype, we must identify the real-world obstacles preventing organisations from fully harnessing AI's power.

Data Collection: We understand that the quality of analysis depends on the quality of the data, and hence, we made sure to identify and connect with relevant experts who are either experiencing these challenges or have expertise in this area. These represent a wide range of roles, including Directors, VPs, CTOs, Cloud Architects and Product Leaders, across globally recognised organisations like AWS, IBM, NVIDIA, Cisco, Autodesk, US Bank, Lucid Motors, Nutanix, and multiple high-growth startups both in India and the United States.

Key Findings Overview:

Our research identifies 4 primary themes defining the current landscape:

1. The Human Capital Crisis
A scarcity of specialized talent creating dependency and stalling progress.

2. The Economic Dilemma
Unpredictable costs and market concentration limiting negotiation power.

3. Operational Constraints
Technical ceilings on scalability, customization, and data access.

4. Governance and Security
Anxieties over data protection and legal compliance slowing adoption.

Current Landscape

The Baseline

Before dissecting the most significant barriers to AI adoption, it is strategically important to establish a baseline of what is working. The ecosystem is not in a state of universal crisis; rather, pain points are concentrated in specific areas.

Infrastructure is Reachable. For most organisations, regional access to compute power is not a primary blocker. This indicates that the foundational layer of infrastructure is accessible enough for most teams to get started.

- 28 out of 44 respondents rated the difficulty of access as low (1 or 2).
- Only 9 respondents rated it as high difficulty (4 or 5).

There is a focus on Practical Application. Current AI initiatives are grounded in high value business functions rather than niche use cases. The most common applications among respondents include:

- Natural Language Processing **(~80%)**
- Predictive Analytics **(~75%)**
- Generative AI **(~75%)**
- Process Automation/Operations **(~65%)**

This clustering indicates a mature focus on leveraging AI for core business functions like text analysis, forecasting, and efficiency gains. This foundation of manageable compute and practical ambition, however, stands in stark contrast to the first critical systemic barrier revealed by the survey:
a profound and debilitating shortage of specialized talent.

Barrier 1

The Human Capital Crisis

The most significant bottleneck identified is human, not technological. A scarcity of specialized talent creates a cycle of vendor dependency and operational fragility.

- **Talent Scarcity:** An overwhelming 37 out of 44 respondents rated the difficulty of managing talent and dependency at a high level (4 or 5).
- **Operational Risk:** The loss of key personnel is a critical threat, with 35 out of 42 respondents rating the risk of talent loss as high (4 or 5).
- **Top Priority:** Building "skilled, well-balanced AI teams" was ranked the #1 priority by the largest share of respondents, surpassing cost and technology concerns

Barrier 2

The Economic Dilemma

Organisations face a market defined by unpredictability and concentration, which erodes bargaining power and long-term planning.

- **Cost Volatility:** The primary issue is not just high cost, but unpredictability. 62.8% of respondents state that cost unpredictability directly impacts business decisions, causing hesitation in deployment.
- **Vendor Lock-In:** A lack of market choice fuels anxiety. 37 out of 42 respondents view vendor lock-in with moderate to high concern, which in turn forces teams into defensive architectural choices.

Barrier 3

Operational Constraints

Even with allocated budgets, technical limitations impose a "ceiling" on innovation, restricting teams to shallow implementations.

- **The "Access Divide":** 43% of teams feel constrained in model customisation, thus limiting them to prompt engineering or RAG rather than deep model modification.
- **Scalability Limits:** Infrastructure offers moderate scalability but lacks true elasticity. Most teams hit a performance ceiling when workloads intensify.
- **Data Friction:** Accessing high-quality internal data remains difficult. Nearly half of respondents (48.8%) report only "moderate" access to usable internal data due to silos and lack of readiness.

Barrier 4

Governance and Security

Anxiety over compliance and security creates friction, slowing adoption and necessitating complex oversight.

- **Data Leakage:** Confidence in third-party data protection is low. 39 out of 42 respondents expressed moderate to high concern regarding data leakage.
- **License Compliance:** Legal ambiguity is a major deterrent. 72% of respondents expressed strong concern regarding open-source license violations.
- **IP Risk:** A majority (31 out of 42) perceive a moderate to high risk of their model's intellectual property being probed or extracted.

Strategic Recommendations

The urgency for these changes is underscored by the survey's finding that **the current system is perceived as more "unfair"; than fair, with an average rating of just 2.8 out of 5.**

For Policymakers and Public Institutions

- **Fund Shared Infrastructure:** Invest in public compute resources to level the playing field for startups and researchers.
- **Standardise Governance:** Develop clear public guidelines for open-source compliance to reduce legal ambiguity

For AI Vendors and Infrastructure Providers

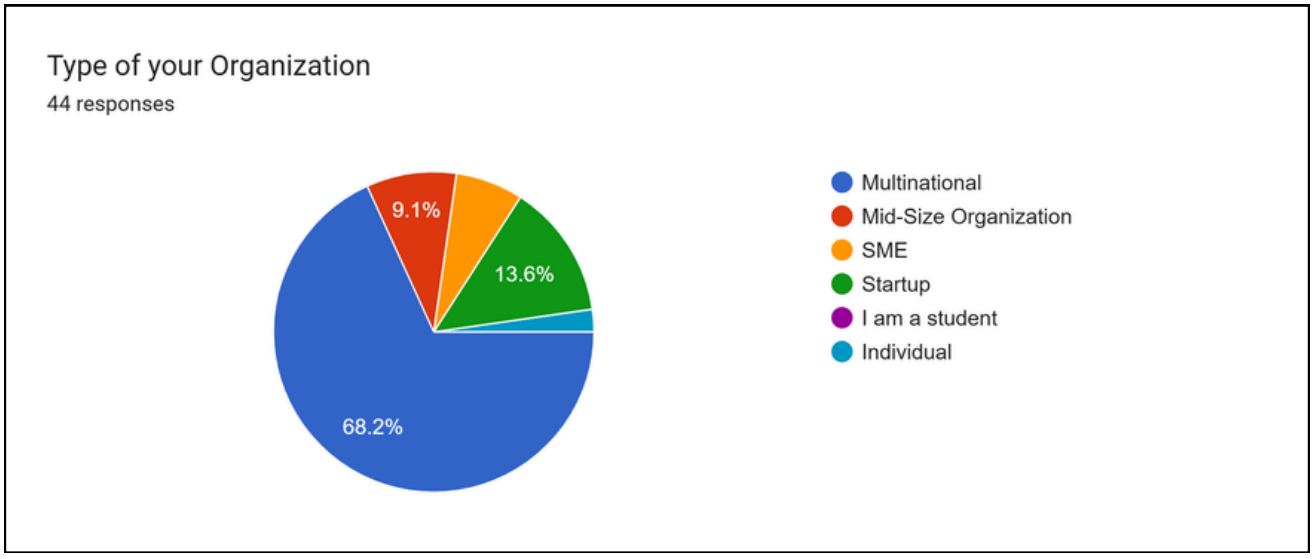
- **Ensure Predictability:** Shift toward transparent, tiered pricing models to eliminate "cost shocks".
- **Prioritise Interoperability:** Reduce switching costs to build trust and allow for flexible, multi-cloud strategies

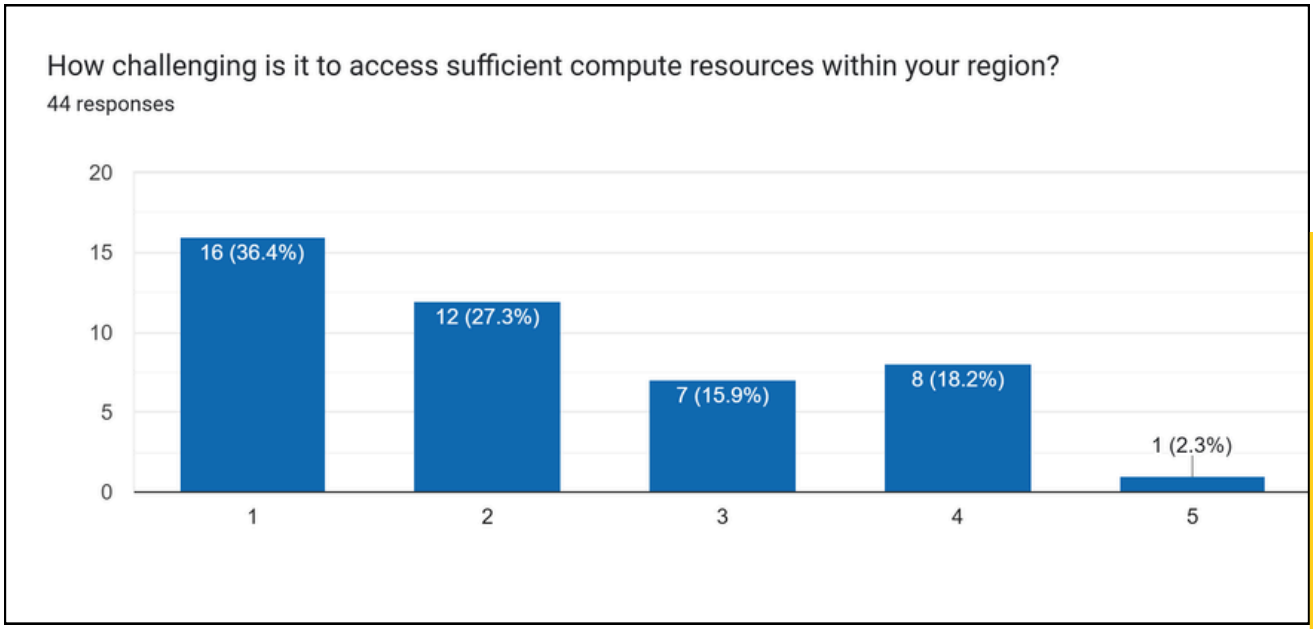
For Organizations Adopting AI

- **Invest in In-House Talent and Continuous Training:** The survey data is unequivocal: the highest-priority action is to build and retain internal AI teams. This reduces vendor dependency, fosters institutional knowledge, and provides the strategic capability to navigate a complex technological landscape.
- **Develop a Proactive Governance and Risk Management Strategy:** Do not treat governance as an afterthought. Prioritize the creation of clear internal policies for data handling, model security, and license compliance to proactively manage the significant risks related to data leakage, IP theft, and legal liabilities.
- **Design for Architectural Flexibility:** Adopt a multi-vendor or hybrid infrastructure strategy from the outset. This approach avoids deep-rooted vendor lock-in, preserves negotiation power, and ensures long-term strategic agility in a rapidly evolving market.

Bibliography

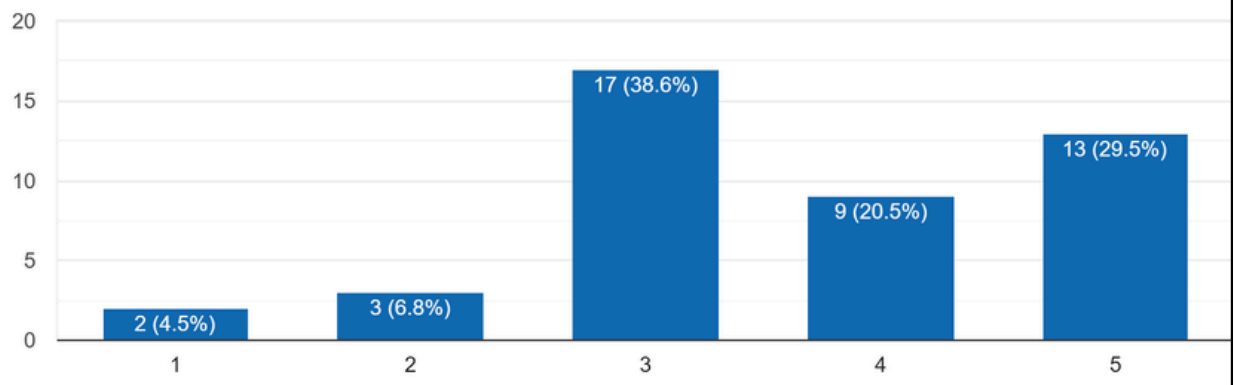
Below are the actual Survey Responses





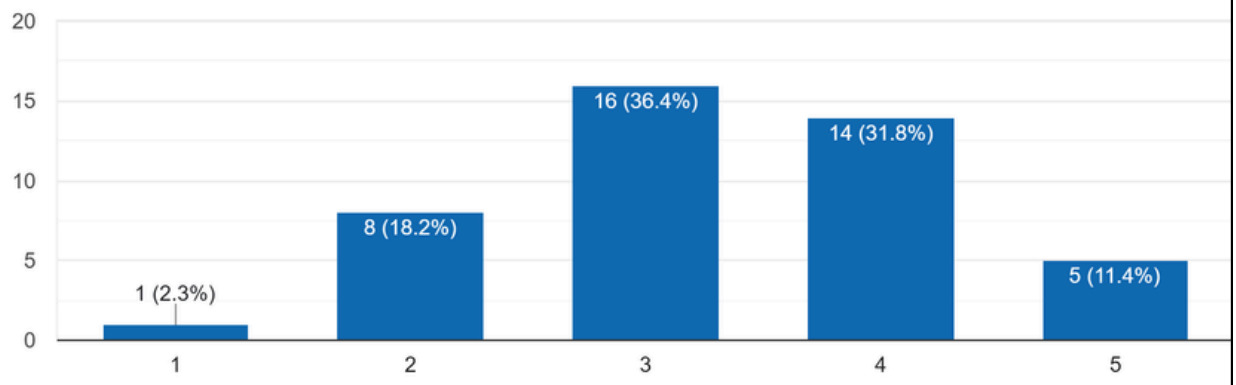
To what extent do unpredictable costs (e.g., GPUs, inference, APIs, models) impact your AI initiatives?

44 responses



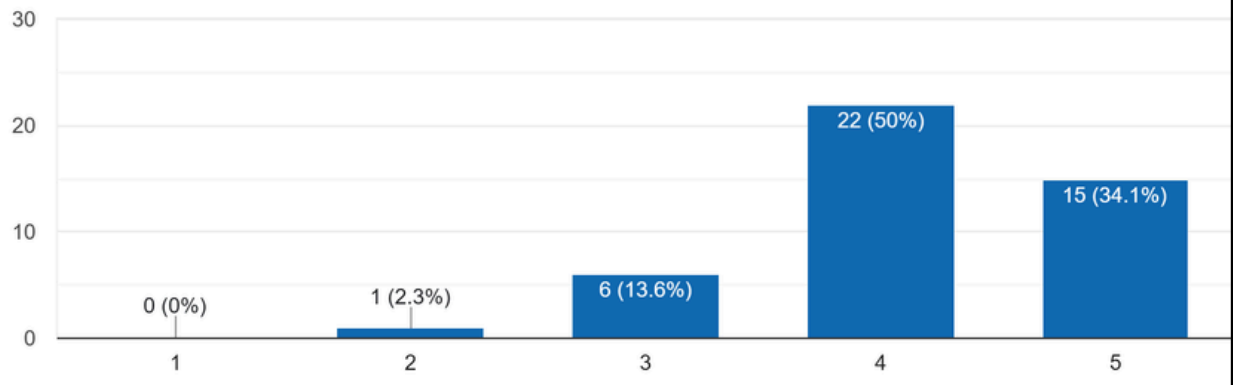
How scalable is your current AI infrastructure, especially in terms of high-performance interconnects?

44 responses



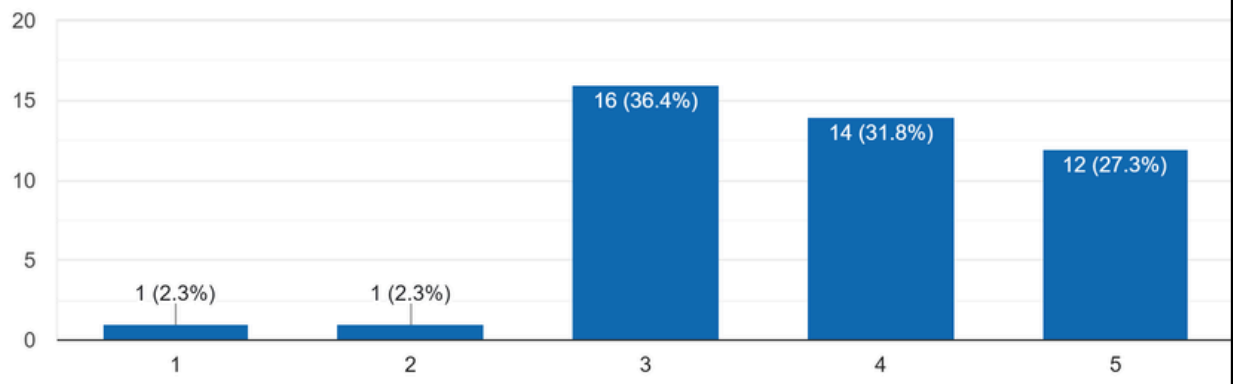
How difficult is it to find or retain specialised AI talent. How difficult is it to avoid dependency on third party providers?

44 responses



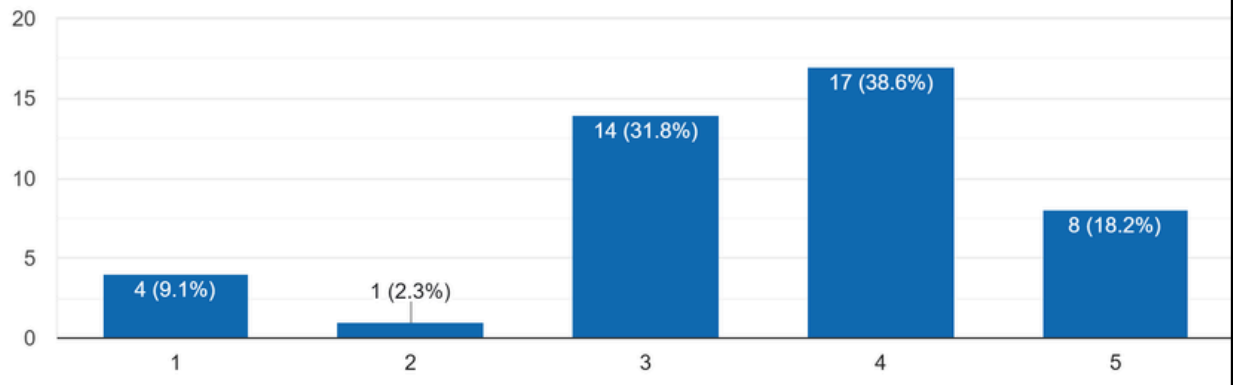
How much does limited vendor availability affect your bargaining power with cloud or AI providers?

44 responses



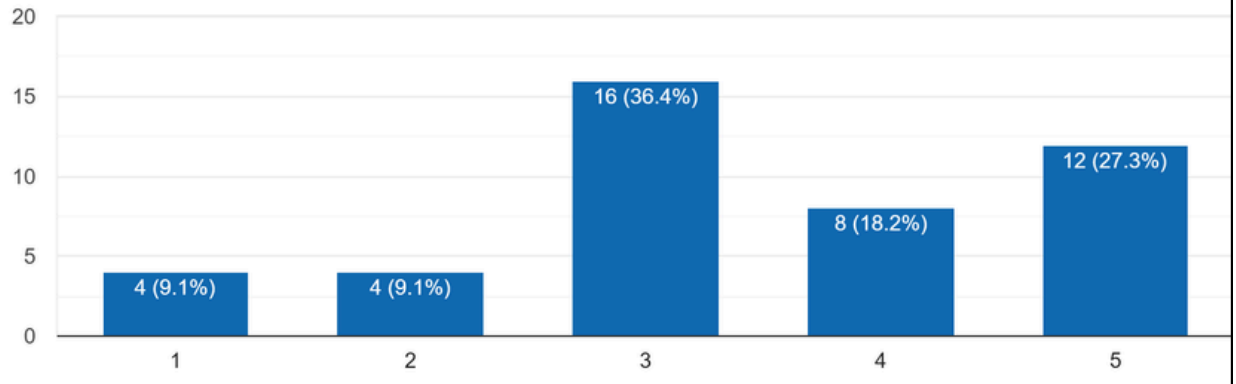
How concerned are you about vendor lock-in due to limited AI infrastructure providers?

44 responses



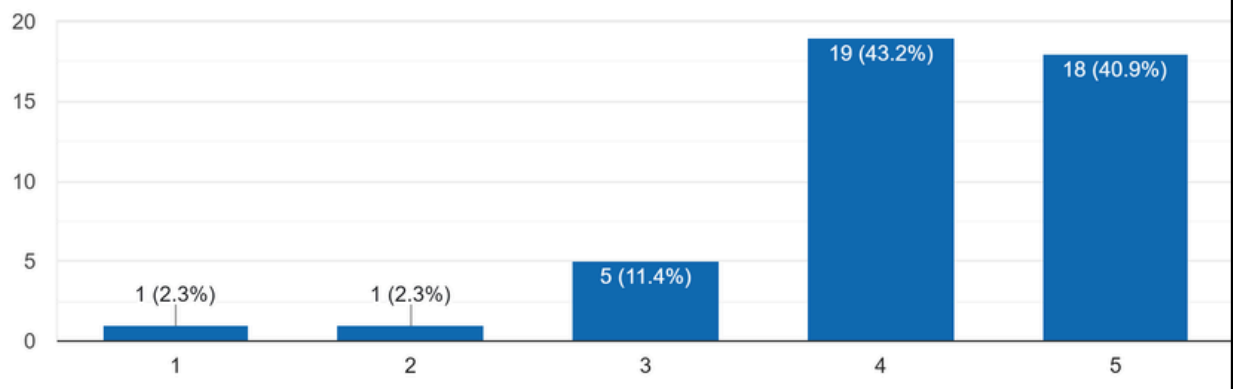
How familiar is your organization with regulated or production-grade AI governance frameworks?

44 responses



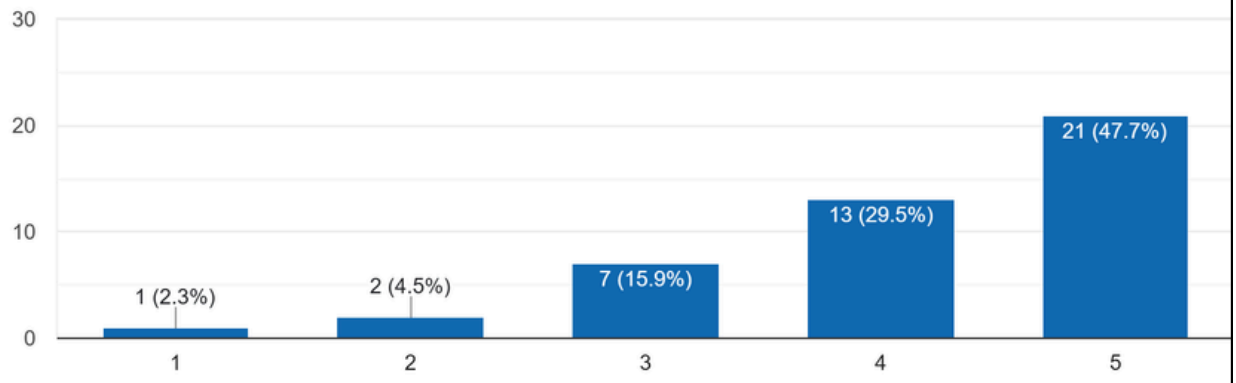
How significant is the risk of losing skilled AI resources due to attrition?

44 responses



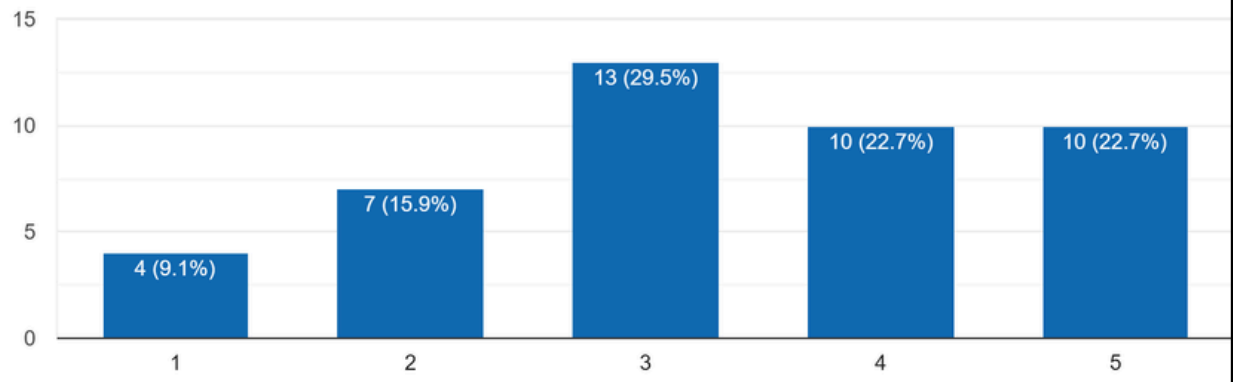
How concerned are you about potential data leakage during model training or fine-tuning using external APIs?

44 responses



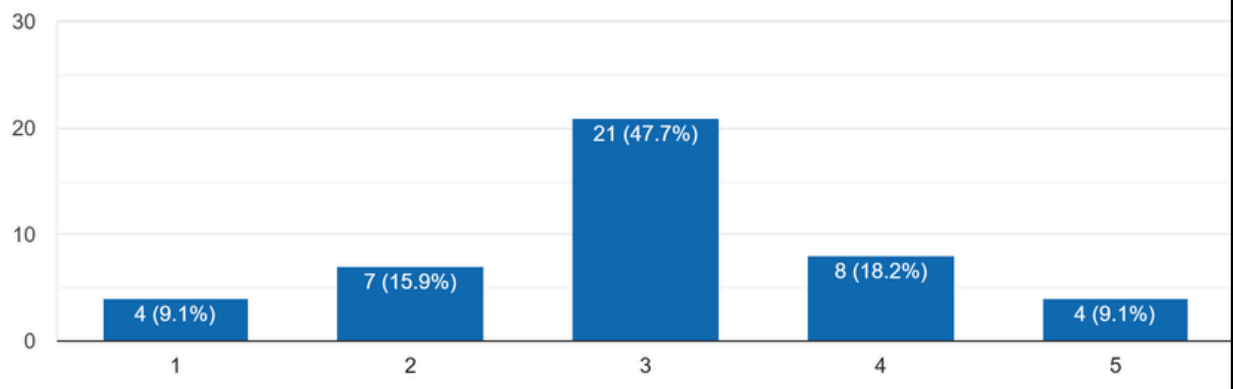
How vulnerable is your organization to cyber threats targeting model IP through automated prompt generation?

44 responses



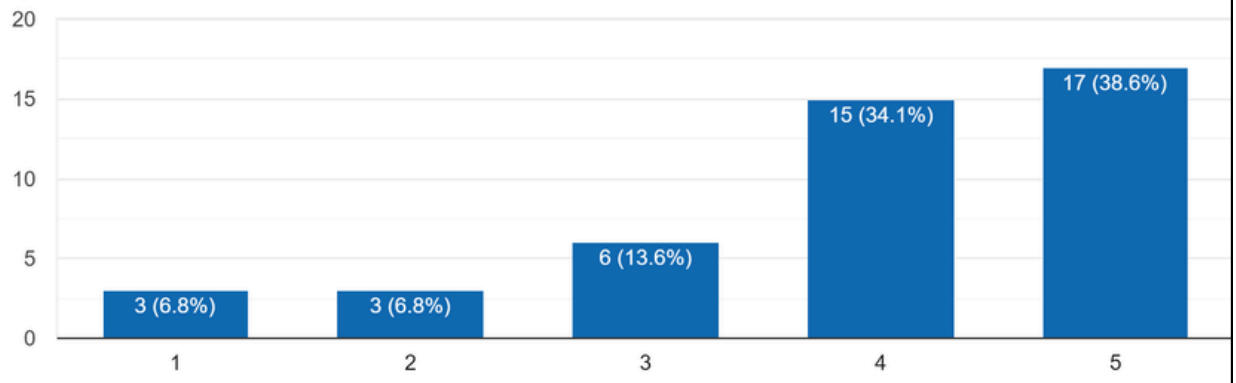
How accessible is high-quality proprietary data for training or fine-tuning LLMs in your organization?

44 responses



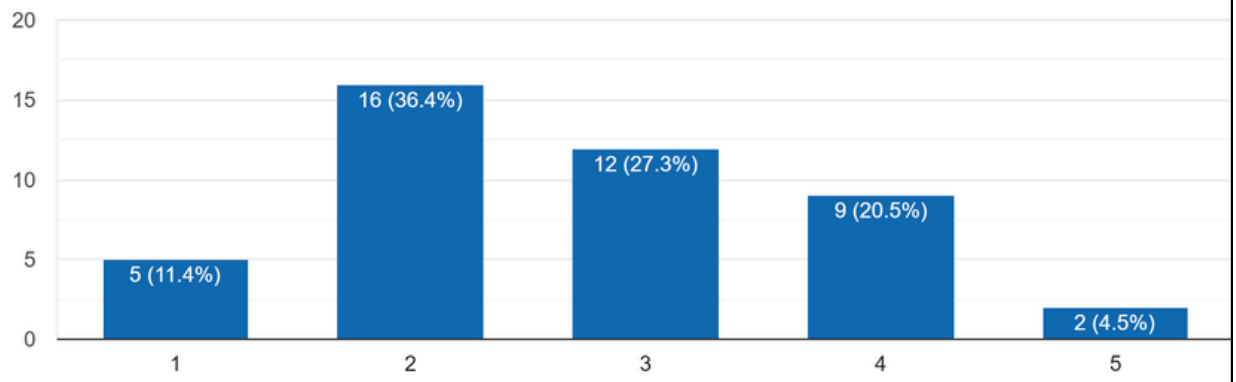
How concerned are you about license violations when using open-source models for commercial purposes?

44 responses



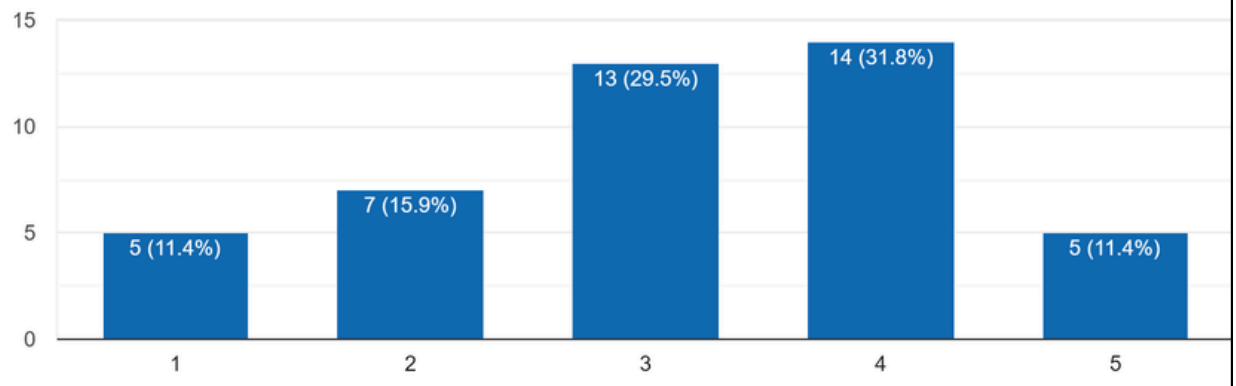
How limited is your access to LLMs beyond API consumption (e.g., downloading weights or fine-tuning)?

44 responses



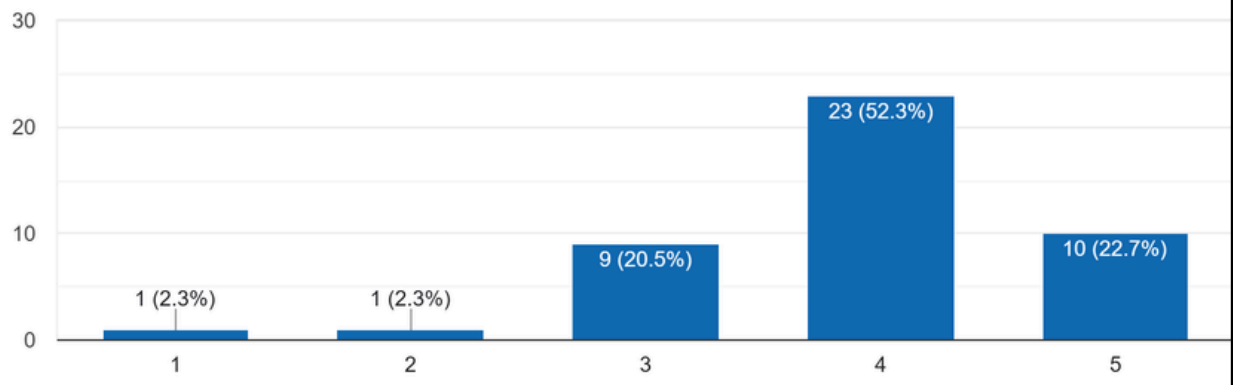
How constrained are your customization options for LLMs (e.g., limited to prompt engineering or retrieval tuning)?

44 responses



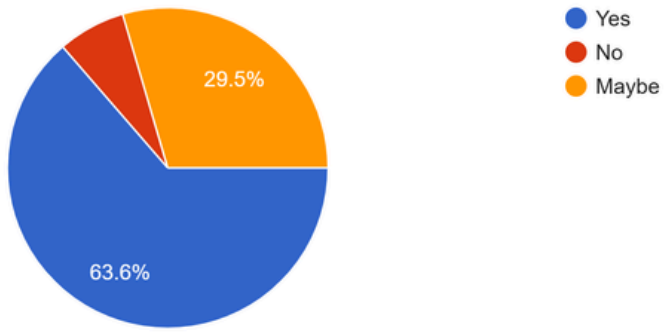
How impactful are LLM usage costs, especially pay-per-use and unpredictable inference expenses?

44 responses



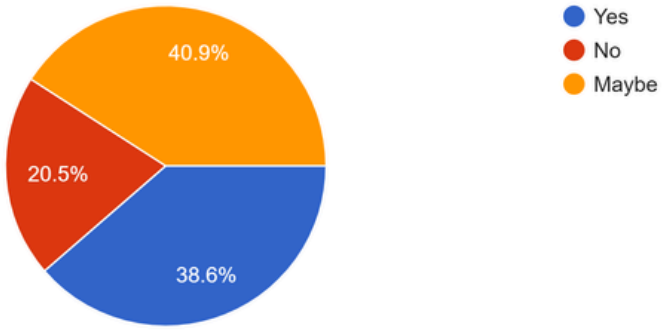
Do pay-per-use and unpredictable inference costs of LLMs have a significant impact?

44 responses



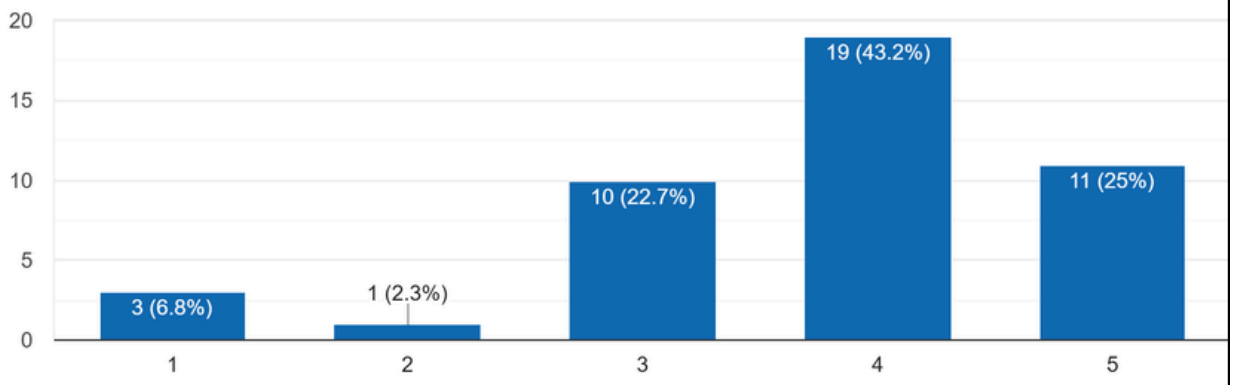
Is it difficult to integrate different tools and platforms within your AI infrastructure?

44 responses



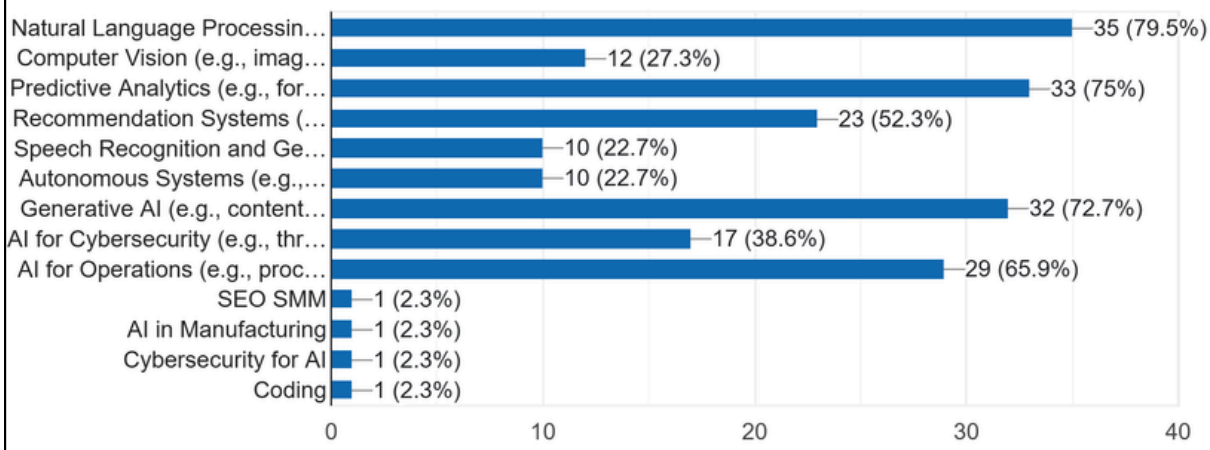
How robust are your platform's identity and access management (IAM) capabilities?

44 responses

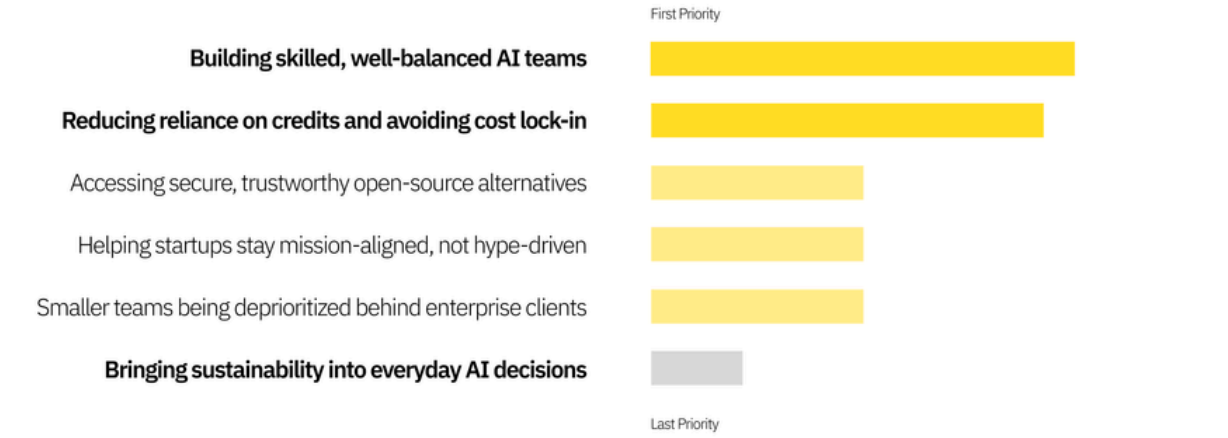


Which areas of AI is your organization currently implementing or considering for future use? (Select all that apply)

44 responses

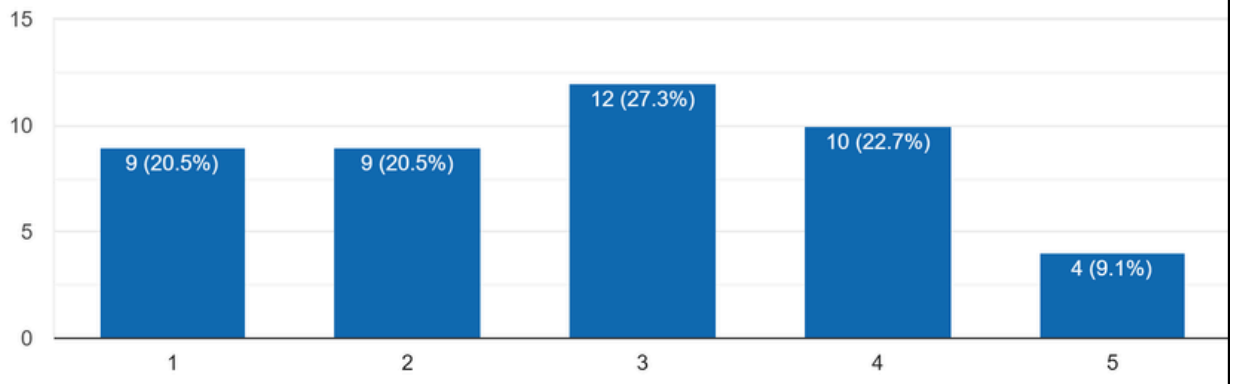


Prioritize the below problem statements as per your understanding of industry needs. (First to Sixth Priority)



On a scale of 1–5, how fair do you believe access to AI infrastructure is today for the smaller players like Startups?

44 responses



If you would like to know more about the project,

Contact me

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