SIX BIGGEST CHALLENGES IN ADOPTING AI

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The benefits of why enterprises must embrace AI are widely spoken of, but the path of adoption is not all rosy. Enterprises often run into significant challenges that make their AI adoption a less than desirable process., it has many challenges. This whitepaper discusses some of the biggest impediments that hamper AI implementation plans and what can be done to overcome them.

CHALLENGE 1: THE RESOURCE/TALENT GAP

The Problem: A lack of critical skills and knowledge can frequently be a roadblock in the initial stages of AI adoption. It isn't easy to know how to fill these holes without a solid data or AI team. Building a functioning machine learning model is more than just a data science project; it requires a wide range of technical and business skills. Businesses are gradually discovering the opportunities that machine learning may provide. As a result, the demand for competent data scientists has risen dramatically.

However, hiring skilled AI professionals can be an uphill task for organizations, taking up considerable time and budget. Studies show that ML modelers and data scientists have the most significant skill gap.

Certain aspects of AI adoption necessitate the technical competence of data scientists. Scaling a data team is critical for developing the appropriate models for a company's specific business needs. However, finding a "data unicorn" with all the abilities a business requires is a complicated (and costly) endeavor.

AI encompasses a wide range of technologies, including advanced analytics with the ability to predict outcomes, Conversational AI, Natural Language Processing (NLP), Robotic Process Automation (RPA), Deep Learning, and others.

The sheer breadth of the technology makes it challenging to find the necessary people to design and implement an end-to-end AI journey across a business.

The Solution:

Empower and train internal teams: Businesses need to work hard to identify and develop talent inside the organization. It is critical to attract, hire, and retain people from diverse backgrounds as diversity is instrumental in mitigating inherent bias in your modeling—a major issue in data science. If the team and the data aren't from a mixed background, the results can be self-fulfilling and even reinforce the lack of diversity.

Partner with educational institutes: Businesses can support students pursuing Data Science degrees at a local institution, which has historically been a good supply of technical expertise. Participating in the community, attending hackathons, and meeting like-minded individuals also assist the team in expanding their network, keeping up with the latest thinking, and being passionate.

Collaborate to grow: Beginning on a small scale with an AI provider will help businesses develop AI knowledge and get support for what AI can achieve. This can be accomplished by selecting a business issue and developing an AI-based solution for it.

Skill Isolation: While no talent is perfect for all organizations, there is usually a skill that is ideal for each organization. Depending on the requirements, some team members can be trained on specific skills rather than training on a complete stack. Instead of searching for a data scientist who can perform all tasks, enterprises must concentrate on identifying the necessary abilities and locating talent with the right fit.

So, an organization can build a data team and grow sustainably while making it easier for people to work together and share skills.

CHALLENGE 2: DATA WOES

Problem:

Data Quality & Quantity: One of the most significant challenges to AI adoption is a lack of sufficient data volume or quality. After all, a data analytics algorithm is only as good as the data it gets. It's also more critical to have accurate, relevant data than it is to have reams of information irrelevant to the primary challenges you want to solve with AI. Data volume, collection process, labeling, and accuracy all come into play since quality and quantity of data are vital for successful AI solutions. AI requires massive volumes of data for optimal performance and a refined dataset to make correct predictions.

Data scarcity and low data readiness are critical challenges for mid-sized firms. This lower dataset size, induced by insufficient funding for collecting methods or just a lack of customers, is frequently to blame for poor performance in many ML initiatives. Many projects fail to get off the ground in a mid-sized organization because they believe that there is no relevant data to utilize or that the collection process is too difficult and time-consuming to be worthwhile.

Open-source data harvesting can occasionally help with this, although it is not always effective.

Data Standards and Policy: AI and machine learning (ML) can help companies better use the vast amounts of data they possess. Obtaining consistent and accurate data quality and quantity is difficult since companies have no universally agreed and widely used data definitions and governance standards.

Many businesses are implementing various AI efforts and updating their data infrastructure. However, existing data practices are a problem since many companies have not reached a high degree of proficiency with critical data-related issues.

Privacy and Compliance: Due to data privacy concerns or inaccessibility, several businesses may struggle to get the necessary data for model training. For example, collecting relevant images in the healthcare industry might be difficult due to the confidentiality of sensitive personal information.

It is vital for enterprises to completely understand all compliance and security issues at the planning stage, allowing them to reduce risks and arrive at model training fully prepared.

Solution:

Get Help from an Expert: A data professional can assist you in determining whether the data you have is relevant to the problems you wish to tackle. If you need to collect more data, a professional team can advise you on which data will be most valuable to you. This targeted approach will not only allow you to work with less data, but it may also result in more relevant findings.

Open-Source Data: Although open-source datasets can be used to test concepts and build MVPs, fully featured solutions require clean data to help organizations accomplish their strategic goals.

Architectural Improvements: This is related to architectural upgrades; by building storage and pathways to enable excellent data collection and providing access to the tools needed to process the data, organizations can benefit from investing in their data efforts.

CHALLENGE 3: IDENTIFYING THE RIGHT BUSINESS USE CASES

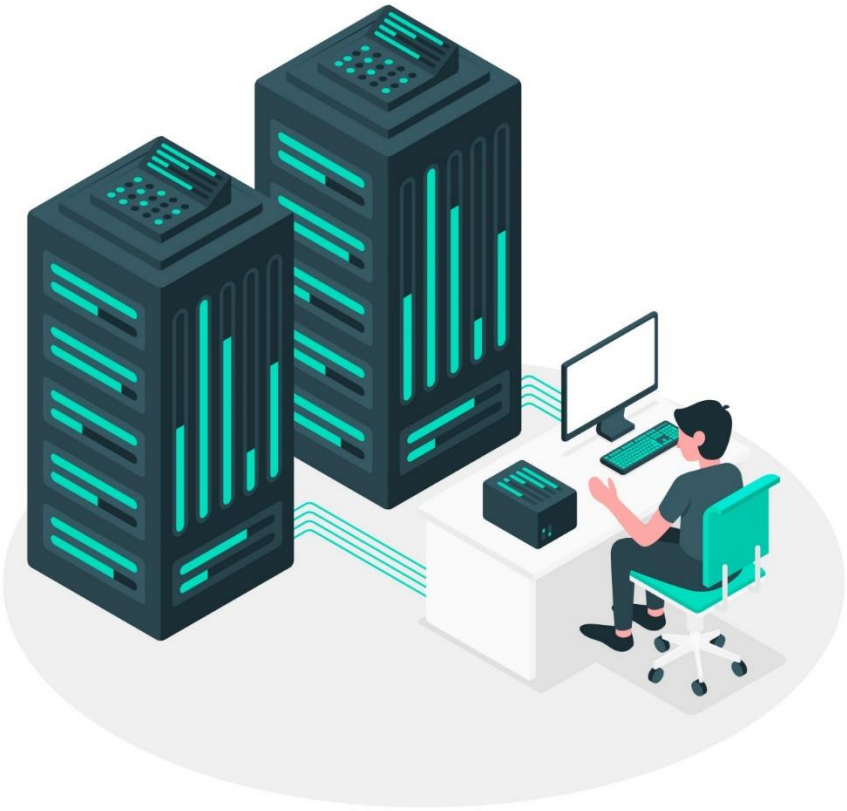
Faster ROI: Investing in AI/ML is a massive decision for most businesses, expecting a significant ROI within the first six to eight months. To do this, selecting the appropriate business use case to optimize with AI/ML is critical. While starting with a "small" first project is a smart idea, ROI can only be demonstrated if the project is a crucial component of the core business.

Priority: One of the most prevalent problems in adopting AI is prioritizing the area of AI use in the organization. Businesses often limit AI to a tiny portion of the company with minimal revenue impact to play it safe and experiment. Because implementing AI and Machine Learning technologies is a significant investment with high expectations of a high degree of ROI.

Business Objectives: Enabling successful AI requires defining use cases aligned with corporate goals that can be implemented. The fundamental challenge is for enterprises to take the time to understand the implications of use cases.

Solution: When identifying business use cases, a defined approach combined with performance measurements enables enterprises to understand the value firsthand and select the best Business Case. This can be accomplished through good business use case analysis and strategy.

CHALLENGE 4: TECHNOLOGY AND INFRASTRUCTURE STACK



Problem: Legacy systems

Many businesses continue to rely on legacy infrastructure, software, or devices to carry out their IT activities. It is challenging to upgrade everything at once. This legacy infrastructure is often an obstacle to adopting machine learning or artificial intelligence. Fortunately, cloud computing – specifically, hybrid-cloud – has changed that.

Solution: Adopting AI and machine learning does not necessitate the replacement of your complete IT infrastructure. But you do need to use the cloud for your data analytics and AI.

Modern "Data Lake" technology functions effectively in a hybrid context, where cloud-based analytics can coexist alongside on-premises operational systems.

Another advantage of cloud solutions is that upgrades and new features are automatically rolled out, resulting in fewer misconfigurations, security risks, and incompatibilities, all of which are vital to be aware of when installing evolving technologies.

CHALLENGE 5: BUILDING TRUST AND TRANSPARENCY

When AI is employed to make difficult-to-understand choices, corporations will face the "black box" problem. People are skeptical of AI's correctness since the black-box model does not explain how it arrived at a particular result. Because of this, the prediction or current suggestion is questioned. To develop confidence in businesses, AI's decision-making process must be transparent. Therefore, the demand for explainable AI is increasing, making it difficult for businesses to deploy AI and necessitating more assistance.

Solution: Explainable AI is a set of tools and frameworks that help you understand and make sense of the predictions made by your machine learning models.

CHALLENGE 6: INSUFFICIENT ROI

ROI is essential for every business project. Because building AI solutions are heavily technical, they can also be pricey. AI businesses, for example, consistently outperform broader tech sector funds in terms of annualized and excess returns.

Furthermore, the possibility of achieving a favorable ROI frequently depends on methodology. Many businesses make the mistake of focusing their initial AI expenditures on big bets. In many cases, we discover that tackling relatively small and straightforward business challenges can provide significant rewards while posing a substantially less financial risk.

Solution: Organizations can develop significant benefits in efficiency, productivity, and other metrics over time by taking a smaller, more concentrated approach to ML deployments.

Analyze the specific problem you want to solve and think about how AI could help. Remember that ROI does not have to be a monetary figure; it can also address other goals. AI could also help you reach critical business goals related to diversity, the environment, and more.

CHALLENGE 7: EMPLOYEE RECEPTION/ FEAR AND MISUNDERSTANDING

AI integration can be scary to non-technical workers because it demands significant training. When AI is used, it can cause confusion among employees. AI's role is often misunderstood despite countless explanations that it's not the enemy and won't replace humans. Employees feel scared and redundant the moment a company implements AI.

Solution: Educating employees on AI adoption will prevent incorrect assumptions or staff dissatisfaction.

Conclusion

Adopting AI has many challenges but identifying the challenges and planning a strategy to increase your chances of success can help you implement AI more successfully.

WE CAN HELP IF YOU ARE PLANNING TO ADOPT AI AS PART OF YOUR BUSINESS, BUT YOU ARE STILL EXPERIENCING CHALLENGES. OUR AI/ML MODEL AS-A-SERVICE HELPS ORGANIZATIONS BUILD, INTEGRATE, AND DEPLOY THE AI/ML CUSTOMIZED MODELS INTO THEIR PROJECTS FOR FASTER AND EASY IMPLEMENTATIONS, RESULTING IN PROVEN OUTCOMES.