

Artificial intelligence and corporate governance

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Abstract

The integration of Artificial Intelligence into businesses offers significant opportunities to improve efficiency, decision making and value creation. However, for companies to fully reap the benefits of Artificial Intelligence, it is crucial to put in place strong corporate governance that incorporates ethical principles and social concerns. Such corporate governance requires specific skills, including data management, responsible Artificial Intelligence system design, system security and understanding the ethical and social implications of Artificial Intelligence. Ethical principles in Artificial Intelligence, such as transparency, justice, nonmaleficence, accountability, freedom and autonomy, trust and dignity, are essential to ensure that Artificial Intelligence is used responsibly and ethically, and to foster trust and adoption of Artificial Intelligence in society. This paper aims to explore the issues of corporate governance in AI, the skills needed to integrate Artificial Intelligence into companies, and the ethical principles that need to be taken into account to ensure responsible and ethical use of Artificial Intelligence.

Keywords

Corporate governance, Artificial intelligence, Ethic, Decision-making

1. Introduction

The rapid development of AI techniques raises many questions for companies, particularly in terms of strategic choices and decision-making methods. Companies need to make strategic decisions about adopting AI in their business, including investments and training of their staff. They must also decide where AI can be most useful and what tasks it can automate. Decision-making is also a key area where AI can be used to improve outcomes. Companies can use AI to help analyze data and trends, as well as predict future outcomes. Governance bodies may face risks such as loss of control over decisions made by AI, misuse of data, or the creation of new social, economic and environmental problems. In addition, the unregulated use of AI can have significant legal implications, such as privacy violations or harm caused by decisions made by machines. However, it is important to ensure that AI is used ethically and transparently, and that final decisions are always made by humans who are accountable for their consequences. Governance bodies such as executive committees and boards of directors must be aware of these issues and respond appropriately. In this article, our ambition is to present some fundamental avenues for an effective and ethical integration of AI by companies.

2. Fundamental tracks to integrate artificial intelligence into corporate strategies

Artificial intelligence (AI) is an emerging technology that offers significant benefits to businesses in all industries. AI can help companies improve operational efficiency, decision-making, and

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profitability. However, integrating AI can also pose challenges, such as the need to invest in specialized talent and skills and to ensure ethics and transparency in its use. In this section, we explore the fundamental paths to integrating AI into business strategies and ensuring its effective and responsible use.

First, it is important to understand the benefits and challenges of integrating AI in-to business strategies. AI can help businesses automate processes, optimize operations, predict market trends, and improve customer experience [1]. However, to fully utilize the benefits of AI, companies must invest in the skills and talent needed to implement the technology. In addition, companies must consider the risks associated with using AI, such as bias and loss of control. Next, companies must analyze their needs and goals to determine how AI can help achieve those goals [1]. For example, a retail company could use AI to improve the accuracy of demand forecasts, which can help optimize inventory levels and reduce costs. A financial services company could use AI to automate compliance processes and improve fraud detection. Companies need to identify areas where AI can add value and develop a strategy to integrate this technology in an efficient and cost-effective manner [2]. Therefore, companies must invest in the talent and skills needed to fully leverage the benefits of AI. Companies can recruit AI specialists and data scientists or train their existing staff to use the technology. Key AI skills include data analysis, machine learning, programming, and project management. Companies must also invest in the technology infrastructure needed to use AI effectively [3]. In addition, it is critical that companies establish appropriate policies and procedures to ensure that the use of AI is ethical and transparent. Companies should be aware of the potential risks associated with AI use, such as bias and loss of control, and develop policies to ensure that AI use is ethical and responsible. Companies can develop codes of conduct for AI use.

3. Artificial intelligence and skills needed

The first issue to address is the professional competencies of business leaders in AI. Business leaders need to be able to understand the challenges of AI, the opportunities it can offer, but also the risks and challenges associated with its use. It's also critical that executive committee and board members understand the implications of AI for their companies and the opportunities and risks that come with it. AI skills may vary by industry and by the role of business leaders. Nevertheless, it is important for business leaders to have a general understanding of AI technologies, their potential applications, and the ethical and social implications of their use. AI skills can also include the ability to develop effective AI strategies, identify relevant use cases for AI, build teams of AI specialists, and manage their professional development. This may require additional training or specialized training for board members [4]. It is important to note that the technology itself is only one part of the issue. The issues are the data needed for AI and the organization and management of the skills and qualifications of the teams in charge of AI techniques. Companies must be able to effectively collect and process the data needed for AI to be effective. AI algorithms learn from data, so the richer and more varied the data, the better the predictions and decisions made by the AI. However, collecting and processing data is not an end in itself. Companies must also be able to understand how to use data to solve specific problems or improve business processes. Data must be interpreted and presented in a way that is useful to business users, who can use it to make informed decisions. In addition, companies must be able to attract and retain the talent needed to develop and manage AI techniques [5]. Executive committees and boards of directors must also be aware of the potential risks associated with the use of AI, such as data security and privacy. They must ensure that appropriate policies and procedures are in place to minimize these risks.

Keeping up with the evolving knowledge on an increasingly strategic topic such as AI can be challenging for a governance body, especially if the skills needed exceed the qualifications of its members. To this end, the company can use several acts to over-come this challenge, such as external AI experts who can provide advice and recommendations on decisions to be made [6]; or the establishment of an AI expert committee that would be composed of members with the

necessary skills and expertise to assess the implications of AI on the company and provide recommendations to the governance body. The latter can also stay informed about the latest trends and advances in AI by following the news, reading specialized publications, and attending conferences on the topic [7].

In sum, it is important that the governance body recognizes the importance of AI to the company and takes steps to ensure that members are sufficiently informed and educated about the technology. By establishing partnerships, using external experts, and creating a committee of experts, the governance body can be better equipped to make informed decisions about AI [6]. Indeed, in recent years, to cope with relentless technological innovation, more and more companies have introduced new technology- or data-centric leadership positions, such as Chief Digital Officer (CDO) or Chief Data Officer (CDO) [8]. These executive positions are created to help companies focus on technology innovation and effective data management, which have become key components of modern business success. The Chief Digital Officer is responsible for the company's digital strategy, including digital transformation, IT and communications management, and creating new digital offerings for customers. The Chief Data Officer, on the other hand, is responsible for the management and exploitation of the company's data. He or she oversees the collection, storage, protection and analysis of data, and ensures that data is used efficiently and ethically [7].

From a regulatory perspective, the debate is ongoing globally. Proposed legislation, such as the EU's AI regulation, has been introduced to address growing concerns about the risks associated with AI use. In addition, ethical guidelines for the use of AI have been developed by organizations such as the Organization for Economic Co-operation and Development (OECD) and the Association for the Advancement of Artificial Intelligence (AAAI). This proposed legislation and these guidelines emphasize the importance of ensuring that AI is used responsibly, transparently and ethically. Therefore, it is critical that organizations develop a thorough understanding of these issues in order to develop appropriate policies and procedures to regulate the use of AI [4]. This may include data management practices, transparency practices, human rights impact reviews, and other measures to minimize the risks associated with AI use. Ultimately, AI regulation and ethical guidelines should be viewed as ongoing efforts to ensure that the benefits of AI are harnessed responsibly and the associated risks are minimized. Organizations must be prepared to adapt as regulations evolve and risks and challenges associated with AI use emerge.

4. Artificial intelligence and ethical principles

Ethical principles are critical to ensuring that data is used responsibly and fairly. With the advent of AI and big data technologies, companies and organizations have more data than ever before, allowing them to create powerful predictive models that can have significant impacts on the users of these systems [9]. The use of these predictive models and AI raises significant ethical concerns, including privacy, discrimination, and transparency [10]. For example, predictive models based on big data can be used to make critical decisions, such as granting loans, recruiting, or rating individuals, which can have significant consequences for the individuals involved. It is therefore crucial that decisions made by AI systems are fair, transparent and justifiable. To ensure the ethical use of data and AI, it is important to adopt clear ethical principles that guide the use of these technologies [11]. Ethical principles in AI promote transparency and accountability in the development and use of AI, which can help build public trust in the technology. This can also help companies avoid potential negative consequences of AI use, such as bias and discrimination. To this end, companies need to be transparent about how data is collected, used and analyzed. As well as predictive models and AI-based decisions must be fair and unbiased. Not to mention that companies must respect users' privacy and protect their personal data by involving stakeholders in the design and implementation of their AI systems [12]. It is also important to note that ethical principles in AI are not static and may evolve over time as technologies change and new ethical

issues emerge. In fact, the development of ethical principles in AI can help drive innovation and encourage R&D by providing a clear framework to guide technological developments. According to Issac [13], there are 7 main ethical principles related to the use of data that are presented in the following table:

Table 1
Major ethical principles about using data

Transparency	Refers to the ability to understand how AI systems work, how they make decisions, and how they are used.
Fairness	Refers to objectivity and non-discrimination in automated decision making.
No malice	Refers to the need to ensure that AI systems are not designed or used to intentionally cause harm to individuals or groups of individuals.
Responsibility	Refers to the obligation of AI developers, providers, and users to consider the consequences of their actions and to ensure that AI is used responsibly and ethically.
Freedom and autonomy	The ability of individuals to make informed decisions and control information about themselves when interacting with AI systems.
Confidence	The need to ensure that AI systems are reliable, accurate and transparent. Users must have confidence in the results provided by AI systems and be able to understand how those results were produced.
Dignity	The need to respect human dignity in the design, development and use of AI systems

To ensure that ethical principles in AI are built into products and services that use algorithms, they must be incorporated from the earliest stages of design and development. Principles such as privacy by design, safety by design, and inclusion by design allow privacy, safety, and inclusion to be built in early in the AI development process. This could involve only giving access to data to employees who need to process it as part of their job, and implementing strong authentication controls, such as the use of complex passwords and biometric recognition systems, to ensure that only authorized employees can access the data. In addition, to ensure data confidentiality and integrity, the company could implement measures such as data pseudonymization, which means that it can replace personal data with anonymous identifiers to ensure that the data is not linked to a specific individual. Finally, the company can adopt best security practices such as using cryptography to protect stored and trans-mitted data, and implementing security protocols to prevent malicious attacks [13].

Additionally, to assess the impact of AI systems on privacy, equality, and other ethical principles, impact assessments can be conducted. These assessments provide an understanding of the ethical and social implications of AI systems prior to deployment, and allow for steps to be taken to minimize risks and maximize benefits for individuals and society as a whole. Impact assessments can include privacy impact assessments, equality impact assessments, and social impact assessments. They help identify potential risks and impacts of AI systems, identify appropriate mitigation measures, and ensure that AI systems are used responsibly and ethically. Ultimately, adopting clear ethical principles is essential to ensure that data and AI are used responsibly and fairly. This will help build user trust and promote responsible and ethical use of these technologies. An ethics committee should be formed to establish a range of principles related to data and AI uses across different industries, business processes, and training programs [14].

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