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**TECNOLOGIAS DISRUPTIVAS, DIREITO E
PROTEÇÃO DE DADOS**

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Apresentação

Entre os dias 27 e 30 de agosto de 2024, a Faculdade de Direito de Franca recebeu o Congresso Internacional de Direito, Políticas Públicas, Tecnologia e Internet. O evento reuniu acadêmicos, profissionais, pesquisadores e estudantes, promovendo o debate interdisciplinar sobre o impacto das inovações tecnológicas no campo jurídico e nas políticas públicas. A programação envolveu Grupos de Trabalho (GTs) organizados para aprofundar temas específicos, abordando desde o acesso à justiça até as complexidades da regulação tecnológica, com ênfase na adaptação do sistema jurídico aos avanços da inteligência artificial e da automação.

O GT 3 – Tecnologias Disruptivas, Direito e Proteção de Dados concentrou-se na análise das tecnologias disruptivas e seus impactos sobre o direito e a proteção de dados pessoais. As discussões abordaram a regulação jurídica de startups, lawtechs e legaltechs, além da tributação e da propriedade intelectual em um cenário de inovação constante. Entre os temas centrais, destacaram-se as implicações das tecnologias da quarta revolução industrial, como a realidade aumentada, o Visual Law, e os contratos inteligentes (smart contracts), que estão moldando o futuro das relações jurídicas. Foi dado especial enfoque à economia do conhecimento e à crescente coleta e tratamento de dados pessoais e sensíveis, considerando os desafios da proteção de dados, vigilância, monitoramento e remoção de conteúdo. As contribuições deste GT oferecem uma visão crítica e propositiva para o direito acompanhar as rápidas mudanças tecnológicas, promovendo a segurança jurídica e o respeito aos direitos fundamentais na era digital.

A UTILIZAÇÃO DA INTELIGÊNCIA ARTIFICIAL NA DUE DILIGENCE DAS OPERAÇÕES SOCIETÁRIAS

THE APPLICATION OF ARTIFICIAL INTELLIGENCE IN THE PROCESS OF DUE DILIGENCE IN THE CONTEXT OF CORPORATE OPERATIONS

**Lucas Bachion Crispim Tavares Cardoso
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Resumo

O artigo aborda a utilização da Inteligência Artificial (IA) na due diligence de operações societárias, destacando o Processamento de Linguagem Natural e o Aprendizado de Máquina. O objetivo principal é investigar como a IA pode transformar o processo, melhorando a eficiência e a precisão, enquanto se mantém em conformidade com normas legais e éticas. Os objetivos específicos incluem avaliar ferramentas de IA, analisar impactos legais e éticos e propor um modelo de integração. A metodologia envolve análise qualitativa e quantitativa, revisões de literatura, estudos de caso e entrevistas com especialistas para obter uma compreensão ampla e detalhada do tema.

Palavras-chave: Auditoria legal, Operações societárias, Inteligência artificial

Abstract/Resumen/Résumé

The article addresses the utilization of artificial intelligence (AI) in the due diligence of corporate operations, emphasizing natural language processing and machine learning. The primary objective is to investigate how AI can transform the process, enhancing efficiency and precision while maintaining compliance with legal and ethical standards. The specific objectives include the evaluation of AI tools, the analysis of legal and ethical implications, and the formulation of an integration model. The methodology encompasses qualitative and quantitative analysis, literature reviews, case studies, and interviews with experts to gain a comprehensive and detailed understanding of the subject matter.

Keywords/Palabras-claves/Mots-clés: Due diligence, Corporate transactions, Artificial intelligence

Theme

The topic covers the application of specific AI technologies, such as Natural Language Processing (NLP) and Machine Learning, in the analysis of financial and legal documents and data during due diligence in corporate transactions. Due diligence is a critical phase in mergers and acquisitions, or as usually know “M&A”, of the “big corps”, where comprehensive reviews of financial records, legal documents, and other pertinent data are conducted to assess the viability and risks associated with the transaction. With the integration of AI, these processes are transformed, allowing for faster, more accurate, and comprehensive analysis, especially in due diligence phase.

The study includes case studies of transactions where AI has been successfully implemented and how this was. These case studies will demonstrate how AI has significantly increased the efficiency and speed of the due diligence process. For instance, in a merger between two large corporations, AI was used to analyze thousands of contracts and financial statements in a fraction of the time it would take a human team, identifying potential risks and inconsistencies that might have been missed otherwise. Moreover, AI technologies can highlight best practices and pinpoint potential risks associated with using AI, such as biases in data analysis or challenges in interpreting AI-generated insights.

On another note, with the introduction of advanced algorithms in due diligence, patterns and risks can be identified that would be difficult to detect manually. This capability is particularly useful in corporate transactions, where the amount of information can be overwhelming. For example, AI can sift through vast amounts of unstructured data, such as emails and memos, to uncover hidden liabilities or undisclosed relationships that could impact the transaction. Additionally, AI, when applied in due diligence, can help predict future outcomes based on historical data, which is axiomatic for strategic decision-making. This predictive capability can be crucial in assessing the long-term viability of an acquisition or merger.

Introduction

Due diligence is a crucial process in corporate operations, involving the detailed analysis of a company before a merger, acquisition, or other similar transactions. Traditionally, this process is laborious, requiring a significant amount of time and human resources to review a

vast amount of documents and data. The traditional method is not only time-consuming but also prone to human error, as analysts may overlook critical details due to fatigue or the sheer volume of information.

However, with the advent of Artificial Intelligence, new possibilities are opening up. AI technologies are capable of processing large datasets at unprecedented speeds, identifying patterns, and providing insights that would be impossible to achieve manually. For instance, AI can quickly identify discrepancies in financial statements, flagging them for further investigation by human analysts. This capability not only speeds up the due diligence process but also enhances its accuracy, ensuring that no critical information is missed.

In recent years, Artificial Intelligence has completely revolutionized the due diligence process in corporate operations. With the implementation of this innovation, companies now have extremely advanced AI tools at their disposal, capable of sifting through and analyzing data sets with superhuman speed. This innovation has made it possible to identify patterns, risks, and opportunities that could easily have been overlooked during traditional manual analysis due to the complexity and volume of the data involved.

The adoption of AI in the due diligence of corporate transactions is a milestone in technological advancement within the corporate sector. AI offers a new dimension in assessing risks and opportunities in business transactions. Natural Language Processing (NLP) and Machine Learning, in particular, have stood out for their efficiency in analyzing financial and legal documents and data. For example, NLP algorithms can analyze textual data to extract meaningful information, such as identifying clauses in contracts that could pose risks. Machine Learning models can learn from past transactions to predict potential outcomes, helping companies make informed decisions. Due diligence, a critical component in mergers and acquisitions, capital investments, strategic partnerships, and other significant business transactions, is expected to benefit enormously from these innovations.

In addition, AI has the potential to transform due diligence—a costly and time-consuming task—into a more agile and efficient process. This not only saves time and resources but also increases confidence in the conclusions reached, thus reducing the risk of unpleasant surprises after a transaction has been concluded. For instance, AI can continuously monitor ongoing transactions, providing real-time updates and alerts about any changes that could affect the deal.

In short, AI is setting a new standard for due diligence in corporate operations, enabling a deeper and more comprehensive analysis. Despite these benefits, the integration of AI into legal and business processes also raises questions about accuracy, data privacy, and legal liability. The reliance on AI algorithms for critical business decisions necessitates a thorough understanding of their limitations and potential biases. It is therefore essential to explore not only the capabilities and advantages of AI but also the challenges and ethical implications associated with its adoption in due diligence.

Research Problem

The research aims to analyze how AI can be effectively integrated into the due diligence of corporate operations to improve efficiency and accuracy while maintaining compliance with legal and ethical standards. This involves addressing several critical issues, including the technical complexity of AI methods, legal and ethical considerations, and organizational and cultural resistance to change.

One of the primary challenges is the technical complexity and accuracy of AI methods. While AI can process large volumes of data quickly, ensuring the accuracy of its analysis is paramount. This involves validating the algorithms used and continuously updating them with new data to improve their predictive capabilities. For instance, AI models need to be trained on diverse datasets to minimize biases and ensure they can accurately analyze different types of documents and data.

Legal and ethical issues are also significant concerns. The use of AI in due diligence must comply with data privacy laws and regulations. This includes ensuring that any data used for training AI models is anonymized and that the AI systems themselves are secure against data breaches. Additionally, there are ethical considerations regarding the transparency and accountability of AI decisions. Companies must be able to explain how AI arrived at a particular conclusion, especially if it impacts the outcome of a significant business transaction.

Organizational and cultural resistance to AI is another hurdle. Many law firms and corporate entities may be hesitant to adopt AI due to a lack of understanding or fear of job displacement. Overcoming this resistance involves demonstrating the tangible benefits of AI, such as increased efficiency and reduced costs, and providing training to employees to work alongside AI tools effectively.

Objectives

General: To investigate how the application of AI can transform the due diligence process in corporate transactions, focusing on efficiency, accuracy, and legal compliance.

Specific:

1. Evaluate the most effective AI tools currently available for due diligence. This includes assessing various AI technologies, such as NLP and Machine Learning algorithms, for their ability to analyze financial and legal documents accurately and efficiently.
2. Analyze the legal and ethical impacts of using AI in due diligence. This involves examining data privacy laws, regulatory requirements, and ethical considerations, such as transparency and accountability in AI decision-making.
3. Propose an AI integration model that maximizes benefits while minimizing legal and ethical risks. The model will provide a framework for effectively incorporating AI into the due diligence process, ensuring compliance with legal standards and addressing ethical concerns.

Methodology

The research will be conducted using a methodology that encompasses both exploratory and quantitative qualitative aspects, aiming for a holistic understanding of the subject. This involves a meticulous analysis of data drawn from rigorously selected academic sources, including scientific publications, case studies, and industry reports. These sources provide a solid foundation of existing knowledge on AI's application in due diligence, highlighting best practices and potential pitfalls.

Interviews with experts in the legal and technological fields will be conducted to gather insights into current practices and future prospects. These experts include legal professionals with experience in mergers and acquisitions, AI specialists, and corporate executives who have implemented AI in their due diligence processes. The interviews will explore the practical challenges and benefits of using AI, providing real-world perspectives that complement the academic literature.

Cross-referencing quantitative data with qualitative insights will allow for a robust and multi-faceted analysis. For instance, statistical analysis of case studies will quantify the time

and cost savings achieved through AI, while qualitative insights from expert interviews will provide context and depth to these findings. This comprehensive approach ensures a thorough understanding of the implications and potential of AI in optimizing the due diligence process.

Development

The AI Revolution in Due Diligence

In recent years, Artificial Intelligence has completely revolutionized the due diligence process in corporate operations. AI tools, such as Natural Language Processing (NLP) and Machine Learning, are at the forefront of this transformation, providing capabilities that were previously unattainable. NLP algorithms can analyze vast amounts of textual data to extract valuable insights, such as identifying risky clauses in contracts or detecting sentiment in communications that may indicate potential issues. These tools can read and interpret legal and financial documents much faster than any human could, ensuring that nothing is overlooked.

Machine Learning, on the other hand, learns from historical data to predict future outcomes. This predictive power is invaluable in due diligence, where understanding potential risks and opportunities is crucial. For example, Machine Learning algorithms can analyze past mergers and acquisitions to identify patterns that led to success or failure, helping companies make more informed decisions.

The use of AI in due diligence not only increases efficiency but also enhances accuracy. Traditional methods are prone to human error, particularly when dealing with large volumes of data. AI mitigates this risk by consistently applying the same standards across all documents and data points. Additionally, AI can work around the clock, providing continuous analysis and updates, which is particularly useful in fast-paced M&A environments.

Moreover, AI can integrate with other technologies, such as blockchain, to enhance the due diligence process. Blockchain provides a secure and transparent way to record transactions and track data provenance, ensuring that the information used in due diligence is accurate and trustworthy. The combination of AI and blockchain can create a robust framework for conducting due diligence, providing unprecedented levels of transparency and security.

Challenges about Technical Complexity and Accuracy

One of the primary challenges is the technical complexity and accuracy of AI methods. AI models must be trained on diverse datasets to minimize biases and ensure they can accurately analyze different types of documents and data. Continuous validation and updating of these models are essential to maintain their accuracy and reliability. For instance, if an AI system is trained primarily on English-language documents, it may struggle with documents in other languages, potentially leading to inaccuracies.

(I) Data Privacy and Security

The use of AI in due diligence must comply with data privacy laws and regulations. This includes ensuring that any data used for training AI models is anonymized and that the AI systems themselves are secure against data breaches. Additionally, companies must ensure that the AI tools they use are transparent about how data is processed and analyzed, providing a clear audit trail that can be reviewed if necessary. The General Data Protection Regulation (GDPR) in Europe, for example, imposes strict requirements on how personal data can be used, and non-compliance can result in significant fines.

(II) Ethical Considerations

There are also ethical considerations regarding the transparency and accountability of AI decisions. Companies must be able to explain how AI arrived at a particular conclusion, especially if it impacts the outcome of a significant business transaction. This is known as the "black box" problem, where the decision-making process of AI is not easily understood by humans. Ensuring transparency and interpretability of AI models is crucial to gain trust from stakeholders and regulators.

(III) Legal Liability

Finally, the reliance on AI in due diligence raises questions about legal liability. If an AI system fails to identify a critical issue, who is responsible? This is a complex issue that requires clear guidelines and legal frameworks to address. Companies must ensure that they have robust processes in place to review and validate AI findings, ensuring that human oversight is maintained throughout the due diligence process.

Conclusion

The use of Artificial Intelligence in the due diligence of corporate transactions" examines how AI technologies, such as Natural Language Processing (NLP) and Machine Learning, can be applied to the analysis of financial and legal documents during the due diligence process in corporate transactions. Focusing on mergers and acquisitions (M&A) cases that used AI, the project highlights how the technology improves the efficiency and speed of the process, as well as analyzing best practices and the risks involved. AI transforms the corporate sector by making due diligence faster and more accurate, analyzing large volumes of data efficiently and identifying patterns, risks and opportunities that may go unnoticed in manual analysis. The project's objectives include investigating how AI can improve due diligence, evaluating existing tools, analyzing legal and ethical impacts, and proposing an integration model that maximizes benefits and minimizes risks. The methodology combines qualitative and quantitative methods, including analysis of scientific publications, case studies and interviews with experts in law and technology, with the aim of making a significant contribution to knowledge about the practical application of AI in business transactions.

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