

ETHICAL CHALLENGES AND SOLUTIONS IN AI FOR SALES TECHNOLOGY**Dileep Kumar Pandiya**

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ABSTRACT

This paper evaluates various ethical issues likely to attract the application of AI in sales technology, together with the possible remedies. Given that AI systems are becoming more advanced and incorporated into sales-related activities, there are emerging opportunities that have never been available before, as well as ethical issues. Some of the most important topics investigated in the study are issues with algorithms and fairness, privacy and data protection, algorithm transparency and responsibility, threats to employment, and the question of customer manipulation. Moreover, based on this analysis, the paper outlines the corresponding remedies, including both the technical ones, such as bias detection and mitigating tools and techniques, and the organizational ones, such as using ethical design principles, encouraging human-AI cooperation, etc. There is also an analysis of current and potential future policy frameworks concerning AI in sales to understand the existing and potential regulations affecting sales-related industries. For these reasons, the paper stresses the necessity of paying adequate attention to these ethical issues concerning consumer trust, business equity, and consumers' values and virtues in technology. Hoping to offer a look at the possible problems and their remedies, this paper may shed light on the ongoing discussion of the possibility of abnormal AI implementation in the sphere of sales technology and supply some ideas for the people in business, policymakers, and developers of the technology who are to maneuver through these ethical dilemmas.

Keywords: Artificial Intelligence, Sales Technology, Ethics, Algorithmic Bias, Privacy, Transparency, Job Displacement, Customer Manipulation, Regulation, Ethical Design, Human-AI Collaboration

I. INTRODUCTION

AI is one of the biggest advancements that has severely impacted the sales industry due to its attributes, such as customer profiling, analytics, and marketing. AI has become an inalienable toolkit for effective sales in today's globalized market, starting with virtual personal assistants, which allow customers to offer round-the-clock service, and finishing with algorithms that can forecast consumers' behavior.

However, the increased deployment of AI in sales technology has attracted various ethical issues, thus making this aspect very important. The problems related to the fairness, transparency, and accountability of artificial intelligence systems in their application increase with the growth of the autonomy of the decision-making models used [1]. Disputes that occurred mainly because of algorithmic bias, privacy violations, and job displacement have been discussed with industry leaders, ethicists, and policymakers [2]. In this connection, it is crucial to emphasize the significance of employing professional ethical analysis in response to such considerations. If it fails, it will face the consequences of damaging the consumer's trust, legal issues, and societal harm. Furthermore, the rules that govern the use of AI are dynamic, which means that the business organization must address these ethical dilemmas to conform to the standards that require such technology.

This article discusses the main ethical concerns in the context of AI used in sales technology, analyzes realistic obstacles, and recommends realistic solutions. Thus, we strive to discuss the main concerns arising from using AI in sales, including the problem of algorithms' bias, data privacy, transparency of actions, and shifts in workplace landscapes. Besides, this paper will explore various regulatory requirements, measures, standards, and practices, as well as the potential trends in the future that will contribute to the definition of ethics in the application of artificial intelligence in the sales technology industry. Thus, based on the critical evaluation of these topics, this article sought to advance the discussion on the appropriate use of AI and offer practical recommendations for businesses, policymakers, and technological stakeholders. Thus, by facing these ethical questions and finding solutions, we can strive to utilize AI and sales based on moral standards properly.

II. OVERVIEW OF AI IN SALES TECHNOLOGY

AI in sales technology is a disruptive innovation. It includes employing modern techniques such as machine learning and natural language processing, among others, in sales. AI is synthetic intelligence replicating human intelligence to learn from data, reason, and make decisions to guide customer engagement [3]. Lots of basic technologies and theories exist in the field of AI sales. Many AI systems are based on machine learning algorithms, usually used to provide independent decision-making based on big data concepts such as pattern recognition. NLP empowers AI to interpret and synthesize human languages, ensuring closer and easier customer interaction [4]. Further, the technology's capacity in terms of vision enables

AI to interpret visual patterns. This capability could be adopted for physical store product identification and customer behavior studies.

A. Current Applications of AI in Sales

In sales, across the sales value, AI has been applied in several ways. Various novel and detailed customer profiles generated through AI algorithms isolate the client by behavior, value, and preference. This allows the sales teams to develop proper and appropriate marketing and sales techniques that are more efficient. Another important application is predictive analytics, which deals with sales, sales history, market trends, and other related factors to predict sales, leads, and customer attrition [5]. This capability puts the control of the selling efforts in the right direction, so sales teams can concentrate on leads likely to produce high sales.

Chatbots and virtual assistants based on artificial intelligence are used in call center services and sales force support [5]. These intelligent agents can answer customer queries, promote products, and even complete sales. They are available 24/7 and cut response times considerably. AI is also very effective in managing leads, where scoring and ranking the leads based on several variables is useful in directing the efforts of the salespersons toward potential clients who are most likely to buy the product.

B. Benefits and Potential of AI in Enhancing Sales Processes and Outcomes



Figure 1: Various Applications of AI in Marketing [8]

From Figure 1 above, when focusing on AI-based systems in marketing situations, promotion, price, location management, product, strategy, and planning have all been essential. Other factors that have been identified as crucial to the marketing of AI applications include scenarios, thinking models, positioning, and targeting in relation to the demands of the end-user and the design of the product.

The incorporation of AI in sales has several possibilities that are recasting the direction of the sector. Tasks that used to take a lot of time can be done automatically and quickly, freeing the sales representatives to do what they do best: build relationships and make sales. It is worthwhile to say that, courtesy of AI-analytic sales teams, they can solve various problems with more knowledgeable decisions [6]. Besides, customers benefit from implementing artificial intelligence in organizations by experiencing enhanced personalization and faster interactions, culminating in increased satisfaction and organizational loyalty. Conversion rates are often increasing because AI can assist in analyzing the potential of every lead and personalizing communication [6]. The use of large amounts of data and the ability to analyze it while identifying many factors make sales forecasts more accurate, which is essential for resource management and planning.

This means that, in the future, AI technologies will be valued for producing even more innovative applications in the sales field. Additional future trends may range from expanding the ability to identify and analyze the customer's emotional state

during the interaction or transaction to developing individualized recommenders that would suggest products the customer would probably need shortly and AI systems that would be able to negotiate with customers. Yet, as AI pervades sales processes, it is advisable to pay attention to the question of technology's ethical use. Challenges like privacy, fairness in algorithms, and the shift in the job nature of sales personnel needs to be tackled effectively so that the positive impact of AI is met with the minimum harm in the contemporary world.

III. ETHICAL CHALLENGES

A. Bias and Fairness in AI Algorithms

The orientation of AI technology has been remarkably fast in the field of sales technology, which has created various ethical issues [14]. The most prominent issues are bias and fairness in AI algorithms (refer to Figure 2). Policies and prejudices that cause discrimination are not inherent in AI systems, meaning that artificial intelligence systems are not genetically free from prejudice that results in discrimination [7]. They usually emerge from the training data, the architecture, or even the prejudice of the coding personnel.

Concerning sales, uses of artificial intelligence include such applications as customer categorization, lead ranking, and targeted marketing [8]. However, these algorithms can reuse and increase societal bias imprints and patterns in their results. For instance, an AI model designed to sort leads depending on the company's historical sales data might learn to give preference to leads based on race, gender, or income level. However, these factors are not included directly in the model. This can lead to what is known as differential treatment, where particular groups end up being locked out of sales chances or are offered worse treatment [9]. Such biases influence existing sales encounters and have implications for businesses and society. Bias in such models is costly to companies because they may hurt the image of a company, attract lawsuits, and operate blind to potentially attractive markets. Also, these biases can perpetuate existing social disparities and worsen social inequality by forming a cycle that disadvantages some groups [9]. The ethical imperative for businesses is clear: they must work to identify and eradicate any bias in how AI helps them assess prospects to guarantee everyone is treated equally and fairly.

Type of Bias	Description	Examples
Sampling Bias	Occurs when the training data are not representative of the population they serve, leading to poor performance and biased predictions for certain groups.	A facial recognition algorithm trained mostly on white individuals that performs poorly on people of other races.
Algorithmic Bias	Results from the design and implementation of the algorithm may prioritize certain attributes and lead to unfair outcomes.	An algorithm that prioritizes age or gender, leading to unfair outcomes in hiring decisions.
Representation Bias	Happens when a dataset does not accurately represent the population it is meant to model, leading to inaccurate predictions.	A medical dataset that under-represents women, leading to less accurate diagnosis for female patients.
Confirmation Bias	Materializes when an AI system is used to confirm pre-existing biases or beliefs held by its creators or users.	An AI system that predicts job candidates' success based on biases held by the hiring manager.
Measurement Bias	Emerges when data collection or measurement systematically over- or under-represents certain groups.	A survey collecting more responses from urban residents, leading to an under-representation of rural opinions.
Interaction Bias	Occurs when an AI system interacts with humans in a biased manner, resulting in unfair treatment.	A chatbot that responds differently to men and women, resulting in biased communication.
Generative Bias	Occurs in generative AI models, like those used for creating synthetic data, images, or text. Generative bias emerges when the model's outputs disproportionately reflect specific attributes, perspectives, or patterns present in the training data, leading to skewed or unbalanced representations in generated content.	A text generation model trained predominantly on the literature from Western authors may over-represent Western cultural norms and idioms, under-representing or misrepresenting other cultures. Similarly, an image generation model trained on datasets with limited diversity in human portraits may struggle to accurately represent a broad range of ethnicities.

Figure 2: Highlighting the various kinds of biases in AI [14]

B. Privacy and Data Security

Technological advancements, especially in how AI systems are designed and developed regarding data handling, have deteriorated individuals' privacy. The processes of AI in sales are built based on information about the buyer, including his purchases, searches, and even posts on social networks [8]. Despite these possibilities, they could result in more targeted and effective selling procedures, and the data also poses serious ethical issues related to personal data rights. Lurking behind data collection and usage poses a host of risks. Cybercriminals can compromise account data, resulting in identity theft, other financial scams, or exploitation [9]. When data is stolen, there are apprehensions about what companies would do with this information or how they would use or share it. The collected information may be used for purposes that customers disagree with or can be sold directly to third parties, compromising trust and concerning the ethical aspect.

Further, the storage and protection of the collected data still need to be improved. More to the point, while corporations must spend heavily on technologies to secure clients' data, there are no infallible security systems. The ethical considerations do not stop here; a company is not only obliged to abide by the laws of data protection but also to evaluate the advantages of possessing vast amounts of people's data against the potential threats to their privacy.

C. Transparency and Accountability

The use of such AI tools grows in sales, which makes the problem of transparency and accountability more significant in ethical discussions. AI systems are becoming more complex, so understanding the reasoning behind the outputs is important [7]. It is especially important in sales, where AI may decide which customers are offered such and such offers, how certain prices are set, or which leads are considered more important.

However, achieving this level of transparency in AI decision-making is a challenge. The dynamism in the structure of most AI systems, especially deep learning algorithms, makes explaining their reasoning difficult [10]. This lack of explainability can become an issue when explanations are required from customers, regulators, or even internal organizations.

The problem of liability only becomes more aggravated in the case of decision-making using artificial intelligence. When an AI system provides a solution that would prejudice someone or give them a poor result, who is deemed to be at fault? Who is to blame for the system's mistake—the system developer or the company that uses the AI? To that end, the nature and focus of these questions show a lack of accountability when using AI in sales technology.

D. Job Displacement and Human Role

Sales automation is another field that has led to several ethical issues within the selling profession; one is job loss due to AI technology [11]. As AI systems grow more competent in performing tasks ranging from generating leads to responding to clients' inquiries, concerns arise over the likelihood of employees losing their jobs in sales. Undoubtedly, this transition is not just a matter of people losing their jobs but also the rebirth of the sales profession. AI is transforming the competencies needed for sales positions, where knowledge of data analytics and collaboration methods with AI systems is becoming more pertinent. This transition gives rise to moral issues in businesses that are responsible for retraining and supporting the affected workforce. However, there are other larger social concerns that one has to take into account as well. Suppose AI's positive impacts will result in future job losses, especially in sales. Departments and other organizations. What will be the effects of economic imbalance and social order? It is still possible to discuss the ethical issue, a conflict between, on the one hand, the productivity and effectiveness that an artificial intelligence system brings and, on the other hand, the demand for meaningful work and assistance for people who AI will most likely displace.

E. Customer Manipulation

Thanks to AI's data processing ability, marketing and sales campaigns can now be tailored to consumers and reach individuals most likely to purchase specific products. At the same time, this capability poses an ethical dilemma regarding the company's ability to manipulate its customers [12]. Hyper-personalization may be beneficial to the extent that organizations enhance the selection of proper offers that will satisfy the needs of customers or even create the right impression when it comes to an organization's products or services; nevertheless, this aspect of hyper-personalization violates ethical standards in cases where it is used manipulatively.

AI systems can work with purchase history, feelings, fears, and ways of thinking. Having this level of understanding of the consumers and being able to customize the message and the offer in real-time opens up ethical questions about the border between creativity and trickery [12]. For example, an AI system might determine that a user is at a time of high tendency to make impulse purchases and, thus, present relevant ads to the user. Although the practices are efficient from a sales point of view, the strategies may be seen as manipulative.

The proposition of the ethical implications is made even more nuanced through the application of emotional AI and sophisticated methods of persuasion [13]. The systems currently in development to identify human emotional states could be employed to turn customers into sales targets to be manipulated. This fine-tuning of marketing messages and appeals based on the psychological knowledge of the individual consumer makes a questionable distinction between catering to consumers' needs and exploiting their weaknesses.

In addition, executing the process implies informed consent and the customer's liberty with the integration of AI [12]. When customers do not know how or to what extent their decisions are dictated by data collection and analysis, can they still be considered free? It is possible that using highly personalized sales strategies that appeal to a customer's emotions might detract from the customer's rational decision-making abilities. The ethical dilemma for businesses is to balance the need for and use of artificial intelligence tools to enhance customers' journeys while not infringing on their rights and liberties. This necessitates creating ethical standards that prioritize transparency and client empowerment, in addition to following rules and regulations.

IV. SOLUTIONS TO ETHICAL CHALLENGES

A. Ensuring Fairness and Equity

Overcoming the adversities of bias and fairness in AI algorithms is very important and should be made standard when implementing AI in sales technology. An important way of achieving fairness and equity is by creating and deploying sound bias detection and prevention methods [14]. This process usually entails preminent algorithmic inspections, a form of investigation of the AI models to establish points of prejudice. These audits will detect the ‘first kind’ of bias that may exist in the data used to train the models and the ‘second kind’ of bias that is introduced during the development of the models.

Thus, implementing technologies like AI depends on diverse datasets to supplement these audits. By increasing the gender and racial diversity of the data set used to train these AI models, the gender and racial bias seen in some of the outcomes can be minimized [14]. Adopting this approach necessitates a deliberate process of identifying and compiling data sets that reference potential customers and their full spectrum regarding race, gender, age, and income bracket.

Another method is to incorporate fairness constraints into AI algorithms directly. This will require adding predefined rules or goals to the model’s design that dictate fair results [14]. For instance, a constraint that a sales AI may have is that the products it suggests for the consumer or the prices it sets should not be in a manner that is unfair to a given demographic of society. Such fairness constraints can be adjusted for the context and the business’s ethical agenda while balancing performance and ethical concerns.

B. Enhancing Privacy Protections

Since AI systems in sales technology depend on methods based on personal data, it is essential to increase privacy. Data anonymization techniques are commonly used in this regard. These methods entail reducing or masking personal information in the data to enable the AI systems to produce analysis while protecting individuals' identities [15]. The final stage is superior to the mere procedure of covering data because it uses intricate algorithms to guarantee the subject’s complete non-identifiability even when subjected to detailed analysis.

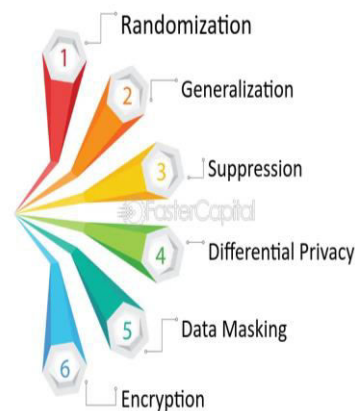


Figure 3: Common Data Anonymization Techniques [15]

Encryption is another important technique for enhancing privacy. By employing sound encryption techniques for data flowing within a business and stored over extended periods, the possibility of someone breaching customers’ details is greatly reduced [15]. This became particularly critical due to the complexity of modern threats in cyberspace.

Measures that can assure the safety of users’ information are not limited to the techniques mentioned above. These measures include limiting the accessibility of given data, reviewing security measures frequently, and involving everybody in an organization in data security matters. The principle of data minimization should also be followed, which implies obtaining and storing data only for established, understandable objectives. As a result of this approach, privacy is protected, and the principles applied correspond to the new data protection regulations.

C. Promoting Transparency and Accountability

Enhancing the transparency of AI decision-makers is a crucial process to develop people’s trust and establish ethically sound AI in the sales domain. Another direction is the appearance of so-called explainable AI (XAI) systems to answer this problem

[16]. They often contain features that require the model to accurately describe and explain the reasoning that led to such a decision and the foundational reasons for any recommendation. In a sales setting, this might mean an AI informing a client that they should buy a specific product and then breaking down how it came to that decision in clear terms (see Figure 4).

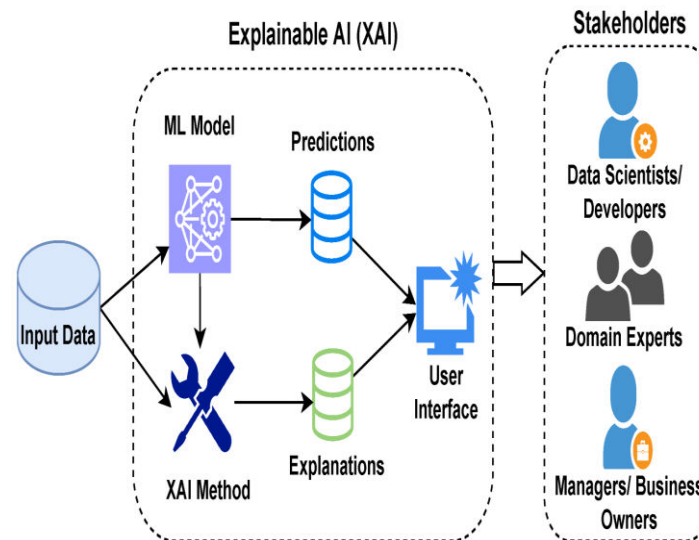


Figure 4: Explainable AI structure [17]. From the image, users (user interface) get to know how their data is used to make marketing and sale predictions, most understandably.

The second important component of transparency is what may be called ‘user-friendly’ disclosures. Such disclosures should inform customers about what data is used and how decisions are made when dealing with an AI system [18]. The difficulty lies in conveying all this information, which must be contained in an easily understandable format for the common end user. The use of accountability mechanisms is very important when it comes to deploying artificial intelligence. This usually includes decision-making on what appropriate rules and regulations for using AI should be implemented regarding sales. When developing these guidelines, input must be derived from ethicists, lawyers, and customers. One way is that oversight committees can also be significant in ensuring compliance with these ethical standards and looking out for potential problems with implementing AI systems. These committees should have the right to check and audit the results of AI models and approve alterations where necessary. Having the lines of accountability drawn guarantees that more considerations for the ethical application of AI are achieved than otherwise.

D. Human-AI Collaboration

As for the ethical issues that disrupt the workplace, it must be stressed that collaboration between humans and AI should be considered rather than the full substitution of humans by AI. In an augmentative sense, AI is seen as a means to enable human workers to do more, not a replacement for them. In sales, this could mean that AI is used to undertake transactional work and number crunching so that employees can concentrate on selling, tackling special cases, and decision-making.

Companies must invest in training employees and updating their skill sets to enable this change [19]. Therefore, these programs should address skills that support AI strengths, including data analysis, ethical decision-making, and enhanced customer relationship management. In this way, the demands for occupational skills can be managed effectively, and there can be less worry about people losing their jobs to AI and more focus on developing a relationship that will enable employees to work with AI effectively.

E. Ethical Design Principles

Applying ethical inputs while designing AI systems is paramount to mitigating many moral issues in AI applications for sales. User-oriented approaches guarantee that the AI systems created not only meet the customers’ and sales professionals’ needs, expectations, and requirements but also take concern for their welfare [20]. This process entails user study, round-the-hatch usability testing, and feedback, subjecting AI systems to end-user interactions and feedback for improvement.

Although sales is already an area of fair competition, one can or should expect non-discrimination elements to be incorporated in the design of AI systems; hence, this means moving from not using discrimination to using the possibility to

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support diverse results. The focus can be, for instance, on recommendation mechanisms that would provide diversified offers unrelated to stereotypical approaches and demographic constraints. It means that specific attention should be paid to the pricing algorithms that customers can employ to avoid their negative impact on some clients.

Ethical design also applies to the user interface and experience of AI-based sales assistants and brokers. The nature of communication, the way options are presented, and the amount of empowerment based on users might be enormously ethical. Designers should always aim to develop interfaces that enable users to achieve their goals, offer sufficient comprehensible information, and always reflect the independence of the user [21]. The proposed solutions should be supported by governing and technical approaches exploring technical, organizational, and cultural aspects. This requires interdisciplinary work, combining data science, ethics, law, and business strategies.

Further, it has to be practiced with an emphasis on constant assessment and developing an adequate approach since novel ethical issues may appear due to the development of AI technology. Ensuring these ethical challenges are met addresses these issues proactively and enables the business to leverage AI to sell technologies ethically and sustainably. It also has the added benefits of reducing risk and providing a way to find new sources of competitive advantage as competition in the field of IoT continues to intensify through leadership in AI. Companies that take the lead in implementing ethical AI will probably find themselves at a competitive advantage as AI continues to change the sales environment. These companies will also likely set new standards for responsible technology use in the sector and strengthen customer connections.

V. REGULATORY AND POLICY CONSIDERATION

Due to the advancement and usage of AI technology in sales technology applications and solutions, various governments and regulatory bodies worldwide have developed frameworks to tackle the ethical issues of the technologies embraced in sales technology. Given this continuously changing regulatory environment, there is a pledged balancing of innovation, people's liberties, and the interests of society.

Over the last few years, several important regulations in the sphere have had a bearing on the application of AI in sales. In this case, the European Union has been at the forefront with proposed legislation dubbed the EU AI Act, which aims to put extensive legislation on AI systems [22]. This act also brings a risk-based approach through classes of AI applications, most of which will affect individuals and society. In sales technology, there might be more restrictions on using AI tools in customer profiling, pricing algorithms, or making decisions that directly impact consumers.

In the United States, as far as the regulation of artificial intelligence is concerned, there is no individual centralized law to regulate it; however, there are different laws, bills, and acts in progress now that also contain elements of AI sales regulation. Existing legislation, such as the California Consumer Privacy Act (CCPA) and the later-improved California Privacy Rights Act (CPRA), always plays a major role in how companies obtain, process, and secure consumers' data in the context of AI sales [23]. At the federal level, there are talks about the possible legislation of AI and propositions revolving around them, embracing themes such as algorithm divulgence, responsibility, and non-discrimination.

Other states, such as China, Canada, and the United Kingdom, also have or are in the process of creating their own AI regulations, which contribute to the rather diverse and multilayered context in which multinational companies operate. Hence, thick, albeit differentiated, layers of regulation pose a problem for international business organizations because of the risk of non-compliance.

The reliability of these regulatory strategies also differs, and many are still under assessment as most of them are relatively young in their application. For this reason, the EU approach, which has been described as systemically proactive, has been regarded as a good approach to addressing the risks of AI. Nonetheless, questions have been raised regarding the effects of implementing such a vast set of rules on innovation and the possibilities of enforcing the regulations. The US has a more sector-by-sector and certainly a more fragmented system, which has provided flexibility for the regulator to develop sector-by-sector rules but will also mean that there could be inconsistencies in protection or gaps in protection.

Another challenge to regulating AI in sales is that technological advancement is almost always too fast for laws to be made. As for the second type, regulators have to identify how to develop more realistic rules that will eventually be balanced and provide enough possibilities for the further growth of innovations and effective measures for protection, though they are still too general.

Therefore, several recommendations for future policies to improve the ethical use of AI in sales are as follows: First, there is a need to encourage and enhance the synchronization of the laws regulating AI across countries to minimize the nuisances that AI creates for undertakings and to guarantee consistent safeguards for purchasers globally. Second, regulation must

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promote the openness and interpretability of AI in sales, requiring companies to disclose how AI is incorporated into the sales processes and how it impacts consumer engagement and choice.

Thus, future regulations should address issues such as protecting consumer rights from bias and discrimination in AI sales or at least introduce a yearly audit of AI systems for bias [24]. More people are also awakening to the need for sales measures that can accommodate the societal effects of AI, like displacing people from their jobs or giving a limited number of people more market control.

Finally, this research recommends that regulatory frameworks promote ethical AI by rewarding corporations for adhering to the recommended norms and standards when designing or implementing AI systems. This may involve tax credits, procuring advantages, or civil immunity for organizations that exhibit accountability to ethical standards in using artificial intelligence. The regulatory environment needs to change in tandem with the field of artificial intelligence in sales. Policies that safeguard individual rights encourage innovation, and guarantee the moral application of AI in sales technology can be created by encouraging cooperation between businesses, governments, and civil society.

VI. FUTURE DIRECTIONS AND RECOMMENDATIONS

A. Emerging Trends in AI Ethics

The overall concept of AI ethics is quite topical and has encountered several important trends to come. One major trend recently gaining popularity is related to the explainability of AI models. Since AI technologies are evolving and becoming more sophisticated, there are high expectations that people will want technologies that explain why the AI made a certain decision. Another recognizable trend is building fairness-aware machine learning, which systematically looks for and eliminates various biases in AI technologies [25]. Also, the application of ethical standards and frameworks in the development process of AI is on the rise, supporting the proper use of AI from the bottom up.

B. Recommendations for Businesses Adopting AI in Sales

To remain ethical when applying AI in sales, several practices ought to be implemented by any company intending to incorporate AI. First, to reduce bias and work with customers, thus avoiding unfair treatment of different population segments, it is necessary to conduct periodic audits of AI-based products and services [26]. Firms should also ensure that they adopt ideal security measures such as encryption and anonymization of data to prevent the exposure of customers' information. In addition, the feature of openness that can be designed in a workplace, promoting the transparency of how AI systems make decisions and function, can also increase clients' trust. One also needs to set up the processes of accountability and governance of the existing applications, for example, the ethics committee for AI, boards of directors, etc., and the corresponding solution or process for the reported ethical incidents.

C. Potential Future Challenges and Solutions

There are, therefore, several areas where businesses will, in the future, experience challenges in the ethical use of AI. This is because the sector could be followed by publications and strict measures and regulations, making it difficult for firms to invest in innovation while relaxing the measures, rules, and regulations, denying users proper protection. Thus, businesses must contact policymakers to ensure that creating more reasonable and fair legislation balances innovative and ethical aspects. Another issue is strengthening the AI system's ability to react to new ethical topics emerging over time. It will be mandatory to establish time-compelling flexible AI architectures that allow the system to learn with ethically shifting paradigms in the future. As developments in AI technologies increase, the way they will not widen existing disparities will be crucial [27]. This risk could be minimized through consistent attempts to set up fair and inclusive artificial intelligence activity and application. Thus, by paying attention to such trends, implementing proper and proactive ethical policies, and being ready for future challenges, organizations can unleash AI's potential in sales while maintaining the utmost ethical principles.

VII. CONCLUSION

AI has revolutionized the integration of sales technology systems. For the first time in a long while, we have some efficiency and some personal touches added to the top of the benefit spectrum, but at the same time, it gives us massive ethical concerns that should not be ignored. This article has analyzed the complex aspects of algorithm bias, privacy, transparency, employment losses, and customer manipulations. These challenges show why ethics issues must be given special consideration when using AI and integration in the various aspects of sales.

As we have seen, solutions to these challenges need to address the different spheres of impact, and simple technical solutions cannot solve them; they also need new organizational policies and legislation. Some of the measures towards ethical use of

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AI in sales include upholding fairness, improving the human aspects of privacy, increasing transparency, advancing AI and human collaboration, and designing for ethical use.

It is pertinent to underscore that appropriate consideration of such ethical matters is completely critical. Not doing this can lead to customer trust loss, deepening societal inequality, or severe regulatory sanctions. However, new ethical issues may arise with the advancement of AI in the future, so that it may be a lifelong process.

Thus, ethical sales technology and AI prospects can be seen as a collective endeavor of technology and software creators, businesses and corporations, representatives of the state and the public, and ethicists. Thus, enhancing both ethical aspects and technological opportunities will allow AI to be used in sales at its best while meeting the moral responsibilities of consumers, employees, and the wider community. The positive outcomes achievable with such an approach include risk reduction and opening up possibilities for creating new opportunities for differentiation that imply sustainable growth in the future sales environment dominated by artificial intelligence.

VIII. REFERENCES

- [1] C. Makridis, S. Hurley, M. Klote, and G. Alterovitz, "Ethical applications of artificial intelligence: evidence from health research on veterans." *JMIR Medical Informatics*, vol. 9, no. 6.e28921. (2021) "
- [2] R. Rodrigues, "Legal and Human Rights Issues of AI: Gaps, Challenges and Vulnerabilities," *Journal of Responsible Technology*, vol. 4, no. 100005, p. 100005, Oct. 2020, doi: <https://doi.org/10.1016/j.jrt.2020.100005>.
- [3] Y. Xu *et al.*, "Artificial Intelligence: a Powerful Paradigm for Scientific Research," *The Innovation*, vol. 2, no. 4, Oct. 2021, doi: <https://doi.org/10.1016/j.xinn.2021.100179>.
- [4] IBM, "What is Natural Language Processing?," *IBM*, 2020. <https://www.ibm.com/topics/natural-language-processing>
- [5] M. Kaput, "Artificial Intelligence (AI) and Machine Learning in Sales," *www.marketingaiinstitute.com*, 2021. <https://www.marketingaiinstitute.com/blog/ai-in-sales>
- [6] S. Lambert, "8 Benefits of Artificial Intelligence (AI) for Sales," *Xcellimark.com*, Jan. 05, 2021. <https://www.xcellimark.com/blog/benefits-of-artificial-intelligence-ai-for-sales> (accessed Aug. 08, 2021).
- [7] J. Khakurel, B. Penzenstadler, J. Porras, A. Knutas, and W. Zhang, "The rise of artificial intelligence under the lens of sustainability." *Technologies*, Vol 6, no. 4 pp. 100-106, 2018. <https://www.mdpi.com/2227-7080/6/4/100/pdf>
- [8] A. Haleem, M. Javaid, M. A. Qadri, R. P. Singh, and R. Suman, "Artificial Intelligence (AI) Applications for marketing: a literature-based Study," *International Journal of Intelligent Networks*, vol. 3, no. 3, pp. 119–132, 2022, Available: <https://www.sciencedirect.com/science/article/pii/S2666603022000136>
- [9] G. Cascavilla, D.A. Tamburri, and W.J. Van Den Heuvel, "Cybercrime threat intelligence: A systematic multi-vocal literature review." *Computers & Security* vol. 105 pp.102258, 2021. <https://doi.org/10.1016/j.cose.2021.102258>
- [10] I. H. Sarker, "Deep Learning: a Comprehensive Overview on Techniques, Taxonomy, Applications and Research Directions," *SN Computer Science*, vol. 2, no. 6, Aug. 2021, doi: <https://doi.org/10.1007/s42979-021-00815-1>.
- [11] M. M. Chandrayigowda, "Ethical Issues with the Use of AI in Business Operation," *Medium*, Jan. 11, 2022. <https://medium.com/@mohan.mcm.1998/ethical-issues-with-the-use-of-ai-in-business-operation-624cabd0bef3#:~:text=The%20growing%20reliance%20on%20AI>
- [12] H. Sarah, "The Ethics of Artificial Intelligence (AI)," *Datamation*, October 11, 2021. <https://www.datamation.com/artificial-intelligence/the-ethics-of-artificial-intelligence-ai/>
- [13] N. E. D. Ferreyra, E. Aimeur, H. Hage, M. Heisel, and C. G. van Hoogstraten, "Persuasion Meets AI: Ethical Considerations for the Design of Social Engineering Countermeasures," *Proceedings of the 12th International Joint Conference on Knowledge Discovery, Knowledge Engineering and Knowledge Management*, pp. 204–211, 2020, doi: <https://doi.org/10.5220/0010142402040211>.
- [14] N. Mehrabi, F. Morstatter, N. Saxena, K. Lerman, K. and A. Galstyan, "A survey on bias and fairness in machine learning." *ACM computing surveys (CSUR)* vol.54, no. 6, pp.1-35, 2021. <https://arxiv.org/pdf/1908.09635>.

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- [15] Imperva, "What is Data Anonymization | Pros, Cons & Common Techniques | Imperva," *Learning Center*, 2021. <https://www.imperva.com/learn/data-security/anonymization/#:~:text=from%20the%20data.->
- [16] M. Langer, D. Oster, T. Speith, H. Hermanns, L. Kästner, E. Schmidt, A. Sesing, and K. Baum, Langer, Markus, Daniel Oster, Timo Speith, Holger Hermanns, Lena Kästner, Eva Schmidt, Andreas Sesing, and Kevin Baum. "What do we want from Explainable Artificial Intelligence (XAI)?—A stakeholder perspective on XAI and a conceptual model guiding interdisciplinary XAI research." <https://doi.org/10.1016/j.artint.2021.103473>
- [17] A.B. Arrieta, N. Díaz-Rodríguez, J. Del Ser, A. Bennetot, S. Tabik, A. Barbado, S. García, S. Gil-López, D. Molina, R. Benjamins, and R. Chatila, "Explainable Artificial Intelligence (XAI): Concepts, taxonomies, opportunities and challenges toward responsible AI." *Information fusion*, vol. 58, pp. 82-115, 2020. <https://arxiv.org/pdf/1910.10045>
- [18] A. J. Wulf and O. Seizov, "'Please understand we cannot provide further information': evaluating content and transparency of GDPR-mandated AI disclosures," *AI & SOCIETY*, Jan 2022, doi: <https://doi.org/10.1007/s00146-022-01424-z>.
- [19] L.W. Murray, and A.M. Efendioglu, "Valuing the investment in organizational training." *Industrial and Commercial training* vol. 39, no. 7 pp. 372-379, 2007. <https://doi.org/10.1108/00197850710829085>
- [20] W. Rodgers, J. M. Murray, A. Stefanidis, W. Y. Degbey, and S. Y. Tarba, "An artificial intelligence algorithmic approach to ethical decision-making in human resource management processes," *Human Resource Management Review*, vol. 33, no. 1, p. 100925, Jan. 2022, doi: <https://doi.org/10.1016/j.hrmmr.2022.100925>.
- [21] E. Wong, "Shneiderman's Eight Golden Rules Will Help You Design Better Interfaces," *The Interaction Design Foundation*, Feb. 23, 2016. <https://www.interaction-design.org/literature/article/shneiderman-s-eight-golden-rules-will-help-you-design-better-interfaces+> (accessed Jan. 08, 2022).
- [22] European Parliament, "EU AI Act: first regulation on artificial intelligence," *European Parliament*, April, 2021. <https://www.iisf.ie/files/UserFiles/cybersecurity-legislation-ireland/EU-AI-Act.pdf>
- [23] T. Dhar, Dhar, Tripti. "The California Consumer Privacy Act: The ethos, similarities and differences vis-a-vis the General Data Protection Regulation and the road ahead in light of California Privacy Rights Act." *Journal of Data Protection & Privacy* vol. 4, no. 2, pp. 170-192, 2021.
- [24] N. Koss, "USA: Employment practices in the emerging AI regulatory framework," *DataGuidance*, Aug. 16, 2021. <https://www.dataguidance.com/opinion/usa-employment-practices-emerging-ai-regulatory>
- [25] W. Meng, "Navigating Latest Trends in AI Ethics," *United Nations University*, Aug. 23, 2021. <https://unu.edu/macau/blog-post/navigating-latest-trends-ai-ethics> (accessed Jan. 08, 2022).
- [26] H. Bubinger, and J.D. Dinneen, "Actionable approaches to promote ethical AI in libraries." *Proceedings of the Association for Information Science and Technology* vol.58, no. 1, pp. 682-684, 2021. <https://arxiv.org/pdf/2109.09672>
- [27] A. Androustopoulou, N. Karacapilidis, E. Loukis, and Y. Charalabidis, "'Transforming the communication between citizens and government through AI-guided chatbots." *Government information quarterly* vol. 36, no. 2 pp. 358-367, 2019: <https://doi.org/10.1016/j.giq.2018.10.001>