

Rights of Consumer and Artificial Intelligence

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Introduction:-

The rapid development of artificial intelligence (AI) technologies in the early 21st century has significantly impacted consumer rights and protections. As AI systems have become more integrated into various products and services, new challenges have arisen concerning privacy, transparency and accountability. This paper will explore the key intersections between AI and consumer rights, the regulatory and policy responses that have emerged and considerations for the future. Over the past two decades, the rapid advancements in AI have profoundly and broadly affected the consumer landscape. AI-powered technologies are now deeply embedded in numerous products and services, transforming how consumers engage with the digital world. While these innovations have brought considerable benefits in terms of convenience, personalization and efficiency, they have also introduced new challenges and risks related to privacy, transparency and accountability.¹

As AI systems have become more prevalent and influential in consumers' daily lives, policymakers, regulators and consumer advocates face the challenge of establishing appropriate safeguards and protections. This paper provides a comprehensive examination of the key intersections between AI and consumer rights, the regulatory and policy responses that have emerged and the ongoing debates and considerations for the future. The proliferation of artificial intelligence in the consumer sphere can be traced back to the early 2000s, when breakthroughs in machine learning and the availability of large datasets led to rapid advancements in areas such as natural language processing, computer vision and predictive analytics. These AI-powered capabilities have since been integrated into a wide range of consumer products and services, transforming how people shop, communicate, entertain themselves and manage their daily lives.²

The integration of AI into consumer products and services has brought about significant changes in various aspects of daily life. From personalized product recommendations in e-commerce platforms to voice-activated virtual assistants in smart homes, AI has become an integral part of the consumer experience. This technological revolution has also extended to areas such as financial services, healthcare and transportation, where AI algorithms are used to assess credit risks, diagnose medical conditions and optimize travel routes. As these AI-driven systems continue to evolve and become more sophisticated, they have the potential to offer unprecedented levels of convenience, efficiency and personalization to consumers.³

However, the widespread adoption of AI in consumer-facing applications has also raised important questions about privacy, data protection, algorithmic bias and transparency. Concerns have emerged regarding the collection and use of personal data by AI systems, the potential for discriminatory outcomes in automated decision-making processes and the lack of explainability in complex AI algorithms. These issues have prompted policymakers and regulators to consider new frameworks and guidelines to ensure that consumer rights are adequately protected in the age of AI. As the technology continues to advance, striking the right balance between fostering innovation and safeguarding consumer interests remains a critical challenge for stakeholders across the public and private sectors.

The Rise of AI and its Impact on Consumers:-

Over the past two decades, artificial intelligence has seamlessly integrated into the consumer landscape. AI-powered virtual assistants, recommendation algorithms, fraud detection systems and autonomous vehicles are just a few examples of the technology that consumers regularly encounter. The growing prevalence of AI has brought numerous benefits, including enhanced convenience, personalization and efficiency. However, it has also introduced new risks

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¹ Karwatzki, S., Dytynko, O., Trenz, M., & Veit, D. (2017). Beyond the Personalization–Privacy Paradox: Privacy Valuation, Transparency Features, and Service Personalization. *Journal of Management Information Systems*, 34(2), 369–400. <https://doi.org/10.1080/07421222.2017.1334467>

² Cook, S., & Chambers, E. (2009). What Helps and Hinders People with Psychotic Conditions Doing What They Want in Their Daily Lives. *British Journal of Occupational Therapy*, 72(6), 238–248. <https://doi.org/10.1177/030802260907200602>

³ Bell, C., Brooklyn, P., & Olukemi, A. (2023). *AI-Driven Personalization in Digital Marketing: Effectiveness and Ethical Considerations*. Mdpi Ag. <https://doi.org/10.20944/preprints202408.0023.v1>

and challenges. A primary concern revolves around data privacy and the collection of consumer information. Many AI systems depend on large datasets of personal information to function and there have been several high-profile incidents of data breaches and misuse. Consumers have expressed unease about the extent to which their habits, preferences and personal details are being tracked and analyzed by AI systems. Questions arise about how this data is being used, shared and secured and whether consumers have sufficient transparency and control.⁴

The integration of AI into consumer products and services has revolutionized various industries, from retail and entertainment to finance and transportation. AI-driven technologies have enhanced user experiences by offering personalized recommendations, streamlining processes and providing real-time assistance. For instance, e-commerce platforms leverage AI to suggest products based on browsing history and purchase patterns, while streaming services use sophisticated algorithms to curate content tailored to individual preferences. In the financial sector, AI-powered fraud detection systems have significantly improved security measures, protecting consumers from potential threats and unauthorized transactions.

However, the widespread adoption of AI has also raised significant ethical and societal concerns. As AI systems become more sophisticated, there is growing apprehension about the potential for algorithmic bias and discrimination. These biases can inadvertently perpetuate or exacerbate existing social inequalities, affecting decisions in areas such as loan approvals, job applications and criminal justice. Additionally, the rapid advancement of AI technology has outpaced regulatory frameworks, leaving gaps in consumer protection and accountability. This has led to calls for increased transparency in AI decision-making processes and the development of ethical guidelines to ensure that AI systems are designed and deployed responsibly, with due consideration for consumer rights and societal impact.⁵

Another major concern is the opacity and lack of explainability in many AI systems. The intricate workings of complex machine learning models can be difficult for consumers to grasp, making it challenging for them to understand how decisions that affect them are made. This lack of transparency can undermine consumer trust and complicate efforts to hold AI systems accountable. There are growing concerns about AI systems displaying biases, making discriminatory decisions, or committing errors with significant consequences for consumers. The increasing autonomy of AI systems, especially in areas like self-driving cars and smart home technology, has also introduced new safety and liability concerns. If an autonomous system causes harm, who is responsible—the consumer, the manufacturer, or the AI developer? These questions of accountability and liability remain under active debate. The policy regarding liability needs to be clarified before these products are sold to consumers.⁶

Regulatory and Policy Responses:-

As AI continues to significantly affect consumers, policymakers and regulators worldwide are striving to establish suitable safeguards and protections. Various approaches have been adopted, each with differing levels of success. A notable example is the European Union's General Data Protection Regulation (GDPR), which was implemented in 2018. The GDPR introduced rigorous requirements for data collection, usage and security, granting consumers greater rights and control over their personal information. It has become a model for data privacy regulations in other regions. Regulatory and policy responses to AI's impact on consumers have evolved beyond data protection to encompass broader ethical considerations and potential societal consequences. In addition to the GDPR, many jurisdictions are developing AI-specific regulations to address issues such as algorithmic bias, transparency and accountability.⁷ For instance, the proposed EU Artificial Intelligence Act aims to categorize AI systems based on risk levels and impose corresponding obligations on developers and users. Similarly, the United States has introduced various bills and initiatives at both federal and state levels to regulate AI applications in areas like facial recognition, autonomous vehicles and automated decision-making systems.

These regulatory efforts are complemented by industry self-regulation and the development of ethical AI frameworks. Many tech companies have established internal ethics boards and guidelines for responsible AI development. International organizations, such as the OECD and UNESCO, have also put forth principles for ethical AI,

⁴ Zhu, W., Wang, F., & Chen, H. (2022). Research on Algorithm Consumers' Attitudes Toward the Use of Personal Information. *Advances in Economics and Management Research*, 1(2), 294. <https://doi.org/10.56028/aemr.1.2.294>

⁵ Kumar, D. A., & Dadhich, D. H. (2024). REGULATORY FRAMEWORKS FOR ARTIFICIAL INTELLIGENCE IN LAW: ENSURING ACCOUNTABILITY AND FAIRNESS. *NUJS Journal of Regulatory Studies*, 9(2). <https://doi.org/10.69953/njrs.v9i2.7>

⁶ Hay, B., & Spier, K. E. (2005). Manufacturer Liability for Harms Caused by Consumers to Others. *American Economic Review*, 95(5), 1700–1711. <https://doi.org/10.1257/000282805775014416>

⁷ Kakarala, M., & Rongali, S. (2025). Existing challenges in ethical AI: Addressing algorithmic bias, transparency, accountability and regulatory compliance. *World Journal of Advanced Research and Reviews*, 25(3), 549–554. <https://doi.org/10.30574/wjarr.2025.25.3.0554>

emphasizing human-centered approaches, fairness and transparency. However, challenges remain in effectively enforcing these regulations and principles, particularly given the rapid pace of AI advancement and its cross-border nature. Policymakers must strike a delicate balance between fostering innovation and protecting consumer rights, while also addressing concerns about AI's potential to exacerbate existing social inequalities or create new forms of discrimination.⁸

However, the application of GDPR to AI systems has highlighted certain gaps and limitations. The regulation's requirements for transparency and explainability have proven difficult to implement in complex machine learning models. Additionally, enforcing accountability when AI systems make decisions that negatively impact consumers has been challenging. In the United States, a more fragmented approach has emerged, with various states and federal agencies taking the lead on AI-related consumer protection issues. For instance, the Federal Trade Commission has issued guidance on AI use in areas such as credit decisions and digital advertising, emphasizing fairness, transparency and consumer control. Meanwhile, California has enacted the first state-level AI Bill of Rights, establishing principles for the responsible development and deployment of AI. Beyond legislative and regulatory measures, there have also been voluntary industry-led initiatives to address consumer concerns. For example, technology companies have developed ethical AI frameworks and guidelines and some have implemented third-party audits to evaluate the impacts of their AI systems. Consumer advocacy groups have also played a crucial role in raising awareness and advocating for stronger protections.

Some of the most prominent examples of AI's impact on consumers include:-

Virtual Assistants: The advent of AI-driven virtual assistants such as Siri, Alexa and Google Assistant has revolutionized the way consumers engage with technology. These conversational agents are capable of performing a wide range of tasks, from retrieving information and managing schedules to controlling devices and facilitating e-commerce.⁹ Nevertheless, they also gather substantial amounts of personal data, which raises concerns about privacy and the potential for misuse.

The proliferation of AI-driven virtual assistants has significantly transformed the landscape of human-technology interaction. These sophisticated systems have become integral to daily life, offering seamless assistance across various domains. By leveraging natural language processing and machine learning algorithms, virtual assistants can interpret and respond to user queries with increasing accuracy and contextual understanding. This capability extends beyond simple information retrieval, encompassing complex tasks such as home automation, personalized recommendations and even emotional support. The integration of these assistants into smartphones, smart speakers and other IoT devices has further expanded their reach and utility, making them accessible to a broader demographic.

However, the pervasive nature of virtual assistants raises critical questions about data privacy and security. As these systems continuously collect and analyze user data to improve their performance and personalization, they amass vast amounts of sensitive information. This includes not only explicit commands and queries but also ambient data from users' environments and behavioral patterns. The potential for this data to be exploited for targeted advertising, surveillance, or even malicious purposes has sparked debates among privacy advocates and policymakers. Striking a balance between the convenience offered by virtual assistants and the protection of individual privacy remains a significant challenge, necessitating ongoing discussions about data governance, user consent and the ethical implications of AI technologies in our increasingly connected world.

Recommendation Algorithms:

AI-driven recommendation systems fuel the content suggestions and product recommendations that consumers encounter on platforms like Netflix, Amazon and social media. While these systems can enhance discovery and personalization, they also have the potential to reinforce biases, manipulate consumer behavior and undermine individual autonomy.¹⁰

AI-driven recommendation algorithms have become ubiquitous in digital platforms, shaping user experiences across entertainment, e-commerce and social media. These systems analyze vast amounts of user data, including browsing history, purchase patterns and engagement metrics, to predict and suggest content or products that align with

⁸ Sanka, V. (2025). Ethical AI in Big Data: Challenges in Bias, Fairness, and Transparency. *International Journal of Scientific Research in Science and Technology*, 12(1), 731–737. <https://doi.org/10.32628/ijrst25121220>

⁹ Tulshan, A. S., & Dhage, S. N. (2019). *Survey on Virtual Assistant: Google Assistant, Siri, Cortana, Alexa* (pp. 190–201). Springer Singapore. https://doi.org/10.1007/978-981-13-5758-9_17

¹⁰ Pathak, A. (2025). Experimental platforms for AI-driven recommendation systems in E-commerce: A technical perspective. *World Journal of Advanced Research and Reviews*, 26(1), 2024–2035. <https://doi.org/10.30574/wjarr.2025.26.1.1317>

individual preferences. The sophistication of these algorithms has led to highly personalized experiences, often accurately anticipating user needs and desires. This level of customization can significantly enhance user satisfaction, increase engagement and drive sales for businesses.¹¹

However, the pervasive nature of recommendation systems raises important ethical concerns. Critics argue that these algorithms can create echo chambers, limiting exposure to diverse perspectives and reinforcing existing beliefs or biases. There are also concerns about the potential for manipulation, as recommendation systems can be designed to prioritize content that maximizes user engagement or platform profits, potentially at the expense of user well-being. Furthermore, the reliance on these systems may erode individual agency, as users become increasingly dependent on algorithmic suggestions rather than making independent choices. As recommendation algorithms continue to evolve and influence consumer behavior, it becomes crucial to address these ethical implications and develop frameworks that balance personalization with transparency, diversity and user autonomy.

Autonomous Vehicles:

The progress in self-driving car technology has brought about new safety and liability issues for consumers. As these vehicles become more prevalent, questions emerge about who is accountable in the event of an accident and how the consumer data collected by these vehicles will be used.¹²

The advancement of autonomous vehicle technology has not only revolutionized transportation but also introduced complex safety and liability challenges. As self-driving cars become more sophisticated and widespread, the traditional notions of driver responsibility and accident culpability are being redefined.¹³ In the event of a collision involving an autonomous vehicle, determining liability becomes a multifaceted issue involving the vehicle manufacturer, software developers and potentially the human occupant. This shift in responsibility raises questions about insurance policies, legal frameworks and ethical decision-making programmed into these vehicles.

Moreover, the vast amount of data collected by autonomous vehicles presents both opportunities and concerns for consumers. These vehicles continuously gather information about their surroundings, passenger behavior and travel patterns, which can be used to improve safety features and optimize traffic flow. However, this data collection also raises privacy concerns, as it potentially allows for unprecedented levels of surveillance and tracking of individuals' movements. The use, storage and protection of this sensitive information become critical issues that require careful consideration and regulation to ensure consumer rights are protected while allowing for technological advancement in the field of autonomous transportation.

Fraud Detection:

AI is increasingly being utilized to detect and prevent financial fraud, thereby safeguarding consumers from scams and identity theft. Nevertheless, the opacity of these AI-driven fraud detection systems can result in false positives and unwarranted service denials, infringing on consumer rights.

AI is being used more and more to find and stop financial fraud. This helps protect people from scams and identity theft. However, these AI systems for detecting fraud can be hard to understand. This lack of transparency can lead to mistakes, where the system incorrectly flags legitimate transactions as fraud.¹⁴ When this happens, people might be wrongly denied services they should have access to. This can violate consumers' rights to fair treatment and access to financial services.

Smart Home Technologies:

The widespread adoption of AI-enabled devices such as smart speakers, thermostats and security cameras in homes has sparked concerns about data privacy and the potential for these systems to be hacked or misused, thereby compromising consumer privacy. Smart home technology refers to devices like smart speakers, thermostats and security cameras that use artificial intelligence (AI) to make homes more convenient and efficient. These devices are becoming increasingly popular in many households.

However, this trend has raised worries about:

¹¹ Krit, S.-D. (2020). Smart Recommendations in E-commerce: A Business Intelligence Approach for Personalized Customer Engagement and Increased Sales. *American Journal of Business and Operations Research*, 1(2), 70–76. <https://doi.org/10.54216/ajbor.010202>

¹² Yoesfianda, R., Zarzani, R., & Aspan, H. (2025). Legal Exploration of Traffic Safety in the Implementation of Self-Driving Car Technology in Indonesia. *East Asian Journal of Multidisciplinary Research*, 4(2). <https://doi.org/10.55927/eajmr.v4i2.36>

¹³ Kaur, S. (2024). Artificial Intelligence Based on Self Driving Cars with Safety Algorithm. *INTERANTIONAL JOURNAL OF SCIENTIFIC RESEARCH IN ENGINEERING AND MANAGEMENT*, 08(04), 1–5. <https://doi.org/10.55041/ijrsrem30644>

¹⁴ Rocha-Salazar, J. D. J., Segovia-Vargas, M. J., & Camacho-Miñano, M. D. M. (2024). Macroeconomic determinants of financial fraud and identity theft. *ECORFAN Journal Mexico*, 28–46. <https://doi.org/10.35429/ejm.2024.33.15.28.46>

1. Data privacy: People are concerned about how their personal information is collected, stored and used by these devices.
2. Security risks: There are fears that these systems could be hacked, allowing unauthorized access to sensitive information or control of home devices.
3. Misuse: Concerns exist about the potential for these technologies to be used in ways that invade people's privacy or manipulate their behavior.¹⁵

As more people use smart home devices, these issues are becoming more important, leading to discussions about how to balance the benefits of this technology with protecting consumer privacy and security.

These are few examples in which AI has become deeply embedded in the consumer landscape. While these technologies have brought significant benefits. They have also introduced new risks and challenges that have important implications for consumer rights and protections.

Rights of consumer:-

- 1) Right to Safety Consumers are entitled to use products and services that are safe and free from unreasonable risks of harm. This right encompasses access to clear information about potential safety hazards and the ability to hold manufacturers and providers accountable for defective or dangerous products.
- 2) Right to Information:- Consumers have the right to obtain accurate, complete and transparent information about the products and services they are purchasing. This includes the right to understand the terms, conditions and costs associated with a transaction.
- 3) Right to Choice Consumers are entitled to make autonomous and 'informed' decisions regarding the products and services they utilize. This encompasses the right to a variety of options, the ability to compare alternatives and freedom from undue influence or manipulation. In the era of Artificial Intelligence, providing this facility to consumers presents a significant challenge. It becomes increasingly difficult for consumers to make 'informed' choices and the likelihood of manipulation is heightened.
- 4) Right to Fair and Equitable Treatment Consumers have the right to be treated fairly, without discrimination and with respect by businesses and service providers. This includes the right to equal access, non-discriminatory pricing and the ability to lodge complaints and seek redress.
- 5) Consumers have the right to control their personal information and determine how it is collected, used and protected by companies and organizations. This encompasses the right to be informed about data practices, access one's data, correct inaccuracies and request the deletion or anonymization of personal information. In India, the Digital Personal Data Protection Act, 2023, ensures the fair use and protection of data. Legal and technical efforts are essential for the proper implementation of the Digital Personal Data Protection Act, 2023.
- 6) Right to Transparency and Explainability Consumers are entitled to understand how decisions impacting them are made, particularly when these decisions involve automated systems and AI. This encompasses the right to receive clear explanations of the factors and logic that underpin these decisions. While it is not feasible for every consumer to grasp the technology behind goods and services, many are interested in making purchases without seeking detailed information.
- 7) Right to Redress and Remedy Consumers are entitled to seek recourse and compensation when their rights are infringed upon or when they suffer harm due to a product or service. This encompasses the right to access clear grievance mechanisms and the ability to contest decisions made by companies.
- 8) Right to Consumer Education and Literacy Consumers are entitled to access information and resources that aid them in understanding their rights, navigating the marketplace and making informed decisions. This encompasses the right to digital literacy training and consumer education initiatives that empower individuals, particularly in the context of Artificial Intelligence.
- 9) Right to Representation and Advocacy Consumers possess the right to organize and advocate for their interests, both individually and collectively, through consumer organizations and other channels. This encompasses the right to have a say in the development of policies, regulations and industry practices that impact consumers. Therefore, consumers should be informed about government policies and decisions regarding Artificial Intelligence. For instance, the Government of India has decided not to permit self-driving cars in the country. Why was this decision made? What is the rationale behind it? Will these vehicles be

¹⁵ Priyanka, A. L. (2024). *Smart Speakers* (pp. 415–440). Igi Global. <https://doi.org/10.4018/979-8-3693-0639-0.ch018>

allowed in the future, or are they permanently banned in India? All this information needs to be provided to consumers.

10) Right to a Sustainable and Responsible Marketplace Consumers are entitled to engage in a marketplace that emphasizes environmental sustainability, social responsibility and ethical business practices. This encompasses the right to receive accurate information regarding the environmental and social impacts of products and services.

These consumer rights form the cornerstone for ensuring a balanced, transparent and accountable relationship between consumers and businesses.¹⁶ As technology, including AI, continues to reshape the consumer landscape, it is crucial that these rights are upheld and reinforced to safeguard the interests of individuals and society.

Artificial Intelligence related issues:-

As AI becomes more prevalent, several key consumer rights have been significantly impacted by this technology, particularly privacy and data protection. A major concern with the rise of AI is the extensive collection and use of consumer data. Many AI systems rely on large datasets of personal information to function and there have been numerous high-profile incidents involving data breaches and misuse. Consumers have expressed considerable unease about the extent to which their habits, preferences and personal details are being tracked, analyzed and potentially shared by AI systems. Issues surrounding data privacy and security are further complicated by the opacity of many AI models, making it difficult for consumers to understand how their information is being used, by whom and for what purpose.¹⁷ Additionally, there are concerns that AI-powered profiling and targeting could be used to manipulate consumer behavior in ways that undermine individual autonomy and choice.

Transparency and Explainability:-

The complexity and 'black box' nature of many AI systems present significant challenges regarding transparency and explainability. The intricate workings of advanced machine learning models can be exceedingly difficult for consumers to grasp, making it challenging for them to understand how decisions impacting them are made. Conversely, revealing such information might infringe on trade secrets. This lack of transparency not only erodes consumer trust but also complicates efforts to hold AI systems accountable. Numerous instances have shown AI exhibiting biases, making discriminatory decisions, or committing errors with serious consequences for individuals. Without clear explanations of how these systems function, it becomes exceedingly difficult for consumers to seek redress or ensure their rights are protected.

Fairness and Non-Discrimination:-

The potential for AI systems to exhibit biases and make discriminatory decisions is a significant concern for consumer rights. Machine learning models can inadvertently reflect and amplify societal biases present in the data used to train them, leading to unfair and unequal treatment of consumers based on factors such as race, gender, age, or socioeconomic status. This issue is particularly problematic in high-stakes domains like credit decisions, employment and housing, where AI-powered algorithms can significantly impact consumers' access to opportunities and services. Numerous cases of AI systems exhibiting discriminatory behavior have raised serious questions about the need to ensure fairness and non-discrimination in deploying these technologies.

Safety and Liability:-

As AI systems become more autonomous and integrated into consumers' daily lives, new safety and liability considerations have emerged. This is particularly evident in the case of self-driving vehicles, where the risk of accidents and the question of who is responsible—the consumer, the manufacturer, the AI developer, or the virus generator—have become major points of contention. Beyond transportation, the increased autonomy of AI-powered devices and systems in the home, workplace and other consumer contexts has raised concerns about potential harms and the need for clear liability frameworks.¹⁸ Consumers want assurance that they will be protected and able to seek redress if an AI system causes them harm or damage.

Consumer Choice and Control:-

At the heart of many issues surrounding AI and consumer rights lies the fundamental question of consumer agency and control. As AI becomes increasingly pervasive and influential in shaping consumer decisions and experiences,

¹⁶ Rust, R. T., & Huang, M.-H. (2021). *AI for Consumers* (pp. 101–107). Springer. https://doi.org/10.1007/978-3-030-52977-2_10

¹⁷ Pramanik, R., & Prabhu, S. (2022). *Analysing Cyber Security and Data Privacy Models for Decision Making among Indian Consumers in an e-commerce environment*. 735–739. <https://doi.org/10.1109/dasa54658.2022.9765113>

¹⁸ Lohmann, M. F. (2016). Liability Issues Concerning Self-Driving Vehicles. *European Journal of Risk Regulation*, 7(2), 335–340. <https://doi.org/10.1017/s1867299x00005754>

concerns arise about the erosion of individual autonomy and choice. From the personalization of online content and recommendations to the automation of significant life decisions, consumers are finding themselves increasingly subject to the decisions and outputs of AI systems. This situation can restrict their ability to make fully informed and independent choices, prompting questions about the necessity of empowering consumers with greater transparency, control and the option to opt out of AI-driven processes that impact them.

Regulatory and Policy Responses:-

As AI increasingly affects consumer rights, policymakers and regulators worldwide are striving to establish suitable safeguards and protections. The strategies they have adopted vary widely, highlighting the complexity of the issues and the necessity for solutions tailored to specific contexts.

Law in the European Union:-

The EU has assumed a leading role in crafting comprehensive data privacy and consumer protection regulations for the digital era. The General Data Protection Regulation (GDPR), which came into effect in 2018, introduced stringent requirements regarding data collection, usage and security, granting consumers greater rights and control over their personal information.¹⁹ The regulation also seeks to address some of the transparency and accountability challenges posed by AI, although its application to complex machine learning models has exposed certain gaps and limitations.

The European Union (EU) has taken a strong position in creating rules for data privacy and protecting consumers in the digital age. In 2018, they introduced a set of regulations called GDPR (General Data Protection Regulation). These rules:

1. Set strict guidelines for how companies can collect, use and protect people's personal information
2. Give people more rights and control over their own data
3. Try to make AI systems more transparent and accountable

However, when applying these rules to complex AI systems, some weaknesses and gaps have been found. The EU is working to address these issues and improve the regulations.

In the United States:

The regulatory approach to AI-related consumer protection issues has been more fragmented, with various states and federal agencies taking the lead. For instance, the Federal Trade Commission has issued guidance on the use of AI in areas such as credit decisions and digital advertising, emphasizing fairness, transparency and consumer control. Meanwhile, California has enacted the first state-level AI Bill of Rights, which sets forth principles for the responsible development and deployment of AI.

In India:

The Digital Personal Data Protection Act of 2023 in India represents a significant step towards safeguarding individuals' personal information in the digital age. This legislation primarily focuses on establishing guidelines for the collection, storage and processing of personal data by various entities.²⁰ However, it is important to note that while data protection is a crucial aspect of consumer rights, it does not encompass the full spectrum of consumer protection issues. The act addresses concerns related to data privacy and security but may not cover other consumer-related matters such as product safety, fair pricing, or dispute resolution mechanisms specific to AI-driven goods and services.

To fully accommodate the rapid advancement of artificial intelligence and its integration into consumer products and services, existing consumer protection laws need to be updated. These amendments would address the unique challenges posed by AI technologies, such as algorithmic decision-making, transparency in AI-driven recommendations and potential biases in automated systems. By revising consumer laws to specifically account for AI-related issues, policymakers can create a more comprehensive framework that balances innovation with consumer rights and safety. This approach would complement the data protection measures outlined in the Digital Personal Data Protection Act, ensuring a more holistic regulatory environment for the emerging AI-driven market in India.

Other Jurisdictions:-

Several countries and regions have also taken steps to address the consumer rights implications of AI. China has issued guidelines on the ethical development of AI, emphasizing principles such as transparency, security and the protection of individual privacy. India has launched initiatives to promote the responsible use of AI, including the

¹⁹ Geko, M., & Tjoa, S. (2018). *An Ontology Capturing the Interdependence of the General Data Protection Regulation (GDPR) and Information Security*. 1–6. <https://doi.org/10.1145/3277570.3277590>

²⁰ Saurabh, S. (2024). THE DIGITAL PERSONAL DATA PROTECTION ACT OF 2023: STRENGTHENING PRIVACY IN THE DIGITAL AGE. *International Journal of Law in Changing World*, 3(2), 77–94. <https://doi.org/10.54934/ijlcw.v3i2.84>

establishment of a national AI repository and guidelines for the public sector. Additionally, the OECD has developed a set of principles for the trustworthy development and use of AI, which have been adopted by several member states. Beyond legislative and regulatory actions, there have also been voluntary industry-led initiatives to address consumer concerns about AI. Some technology companies have created their own ethical AI frameworks and guidelines and have implemented third-party audits to assess the impacts of their AI systems. Consumer advocacy groups have also played a crucial role in raising awareness and pushing for stronger protections.

Ongoing Debates and Considerations:

As AI continues to evolve and become more deeply embedded in the consumer landscape the debates around its implications for consumer rights are likely to intensify. Some of the key issues and considerations include:

Balancing Innovation and Protection: The challenge is to harmonize the push for AI innovation with the need to safeguard consumer interests. Policymakers and regulators must adeptly navigate this delicate balance, ensuring that essential protections are in place without stifling technological progress. This requires a nuanced understanding of the trade-offs involved and the flexibility to adapt regulatory strategies as technology and its applications evolve. **Adapting Regulations to Emerging Risks:** As new AI applications and use cases emerge, existing laws and regulations may need updates or expansions to address the unique challenges they pose. This calls for continuous monitoring, stakeholder engagement and regulatory agility. Policymakers must be prepared to act swiftly to address emerging consumer risks while also maintaining a forward-looking approach to anticipate and mitigate future threats.

It emphasizes that policymakers and regulators need to:

1. Find a middle ground between encouraging AI development and ensuring consumer safety.
2. Understand the complexities involved and be flexible in their approach.
3. Update existing laws as new AI applications emerge.
4. Continuously monitor the field and engage with stakeholders.
5. Act quickly to address new risks to consumers.
6. Think ahead to prevent future problems.

The main idea is that regulations need to be adaptable and forward-thinking to keep up with rapidly evolving AI technology while still protecting people's interests.

Enhancing Transparency and Explainability:

Improving the transparency and explainability of AI systems is essential for helping consumers understand how decisions impacting them are made. This effort may require developing new technical methods and establishing clear communication and disclosure standards. Tackling the "black box" issue inherent in complex machine learning models is a primary concern for researchers, policymakers and industry leaders.²¹ **Ensuring Algorithmic Fairness and Non-Discrimination:** There is an increasing awareness of the need to address bias and discrimination in AI systems, which can significantly affect consumers. Developing robust methods for testing and auditing AI systems for fairness, along with establishing clear accountability mechanisms, is an area of active research and policy development. Deploying AI in a way that promotes equal treatment and access is a critical imperative for consumer rights.

Enhancing transparency and explainability in AI systems is crucial for building trust and understanding among consumers. This involves developing advanced techniques to interpret complex machine learning models and creating standardized methods for communicating AI decision-making processes. Researchers are exploring various approaches, such as model-agnostic explanation methods, interpretable AI architectures and visualization tools, to make AI systems more comprehensible. Additionally, policymakers are working on establishing guidelines for AI transparency, which may include requirements for companies to disclose the use of AI in decision-making processes and provide clear explanations of how these systems arrive at their conclusions.

Ensuring algorithmic fairness and non-discrimination is equally important in protecting consumer rights in the age of AI. This effort requires a multifaceted approach, combining technical solutions with policy interventions. Researchers are developing sophisticated techniques to detect and mitigate bias in AI systems, including fairness-aware machine learning algorithms and comprehensive auditing frameworks. Policymakers are considering regulations that mandate regular fairness assessments of AI systems used in critical domains such as finance, healthcare and employment. Furthermore, industry leaders are increasingly recognizing the importance of diverse and inclusive teams in AI

²¹ Balasubramaniam, N., Kujala, S., Kauppinen, M., & Hiekkanen, K. (2022). *Transparency and Explainability of AI Systems: Ethical Guidelines in Practice* (pp. 3–18). Springer. https://doi.org/10.1007/978-3-030-98464-9_1

development to help prevent the perpetuation of societal biases in AI systems.²² The goal is to create AI technologies that not only avoid discrimination but actively promote equal treatment and access for all consumers, regardless of their demographic characteristics.

Clarifying Liability and Accountability:

As AI systems become more autonomous and influential in consumers' lives, determining responsibility when issues arise becomes increasingly complex. Establishing clear liability frameworks and mechanisms for redress is crucial to safeguarding consumer rights and ensuring meaningful consequences for AI-related harms. This is especially vital in high-stakes areas like healthcare, finance and transportation. Empowering Consumer Choice and Control: Ultimately, the goal should be to equip consumers with the information, tools and agency necessary to make informed decisions about the AI-powered products and services they use. This may involve enhancing consent and control mechanisms, as well as expanding consumer education and digital literacy efforts. Consumers should be able to understand, engage with and opt out of AI-driven processes that affect them, thereby preserving their fundamental right to self-determination.

Clarifying liability and accountability for AI systems is a multifaceted challenge that requires collaboration between policymakers, industry leaders and legal experts. As AI technologies become more sophisticated and pervasive, traditional notions of responsibility may no longer suffice. A comprehensive framework must address various scenarios, including AI errors, biased decision-making and unintended consequences. This framework should delineate the responsibilities of AI developers, deployers and users, while also considering the unique characteristics of AI systems, such as their ability to learn and evolve over time. Establishing clear chains of accountability and mechanisms for dispute resolution will be crucial in building public trust and ensuring that consumers have recourse when AI-related harms occur.²³

Empowering consumer choice and control in the age of AI requires a multifaceted approach that combines technological solutions, regulatory measures and educational initiatives. Enhanced transparency about AI-driven processes, including how data is collected, used and shared, is essential for informed decision-making. Developing user-friendly interfaces that allow consumers to easily adjust AI settings, opt out of certain features, or delete their data can help preserve individual autonomy. Additionally, comprehensive digital literacy programs should be implemented to educate consumers about the benefits and risks of AI technologies, enabling them to make more informed choices. By fostering a culture of informed consent and providing meaningful control options, society can strike a balance between harnessing the potential of AI and protecting fundamental human rights and values.

Fostering Collaborative Governance:

Tackling the intricate challenges at the intersection of AI and consumer rights demands a collaborative, multi-stakeholder approach. Policymakers, regulators, industry leaders, consumer advocates and academic experts must unite to create comprehensive and adaptable frameworks for AI governance. This endeavor will require ongoing dialogue, research and a commitment to continuously reassess and refine the strategies employed. Ensuring fairness in autonomous decision-making is a major concern for consumers. As autonomous decision-making becomes integral to AI-driven goods and services, consumers need to understand how and why decisions are made by the products they purchase. If something goes wrong, it raises questions about accountability: Is the responsibility on the buyer, the manufacturer, or the individual who negligently purchased without adequate technical information? Consequently, there is an increased risk of consumer rights violations. Meanwhile, the commercial sector is making considerable efforts to enhance AI goods and services.

Fostering collaborative governance in the realm of AI and consumer rights necessitates a multifaceted approach that addresses the complex interplay between technological advancement and consumer protection. This collaborative effort must extend beyond traditional boundaries, involving not only policymakers and regulators but also industry innovators, consumer advocacy groups and academic researchers.²⁴ By bringing together diverse perspectives and expertise, stakeholders can develop more robust and nuanced frameworks that anticipate and mitigate potential risks

²² Sharma, R. (2025). Addressing Algorithmic Bias in Statistical Models: Integrating Technical Solutions with Ethical Governance for Fair AI Systems. *International Journal of Scientific Research in Computer Science, Engineering and Information Technology*, 11(1), 2955–2966. <https://doi.org/10.32628/cseit251112316>

²³ Schmidt, J.-H., Bartsch, S. C., Adam, M., & Benlian, A. (2025). Elevating Developers' Accountability Awareness in AI Systems Development. *Business & Information Systems Engineering*, 67(1), 109–135. <https://doi.org/10.1007/s12599-024-00914-2>

²⁴ rzaskowski, J., & Jull Sørensen, M. (2025). *Generative AI and Consumer Protection*. Oxford University. <https://doi.org/10.1093/oxfordhb/9780198940272.013.0018>

while fostering innovation. The ongoing nature of this collaboration is crucial, as the rapid evolution of AI technologies requires constant vigilance and adaptation of governance strategies.

The challenge of ensuring fairness in autonomous decision-making systems is particularly pressing, as it directly impacts consumer trust and rights. As AI-driven products and services become more prevalent in everyday life, consumers face increasing difficulty in understanding the underlying mechanisms that influence decisions affecting their lives. This lack of transparency raises significant concerns about accountability and liability in cases of malfunction or unintended consequences. The commercial sector's efforts to enhance AI products must be balanced with a commitment to transparency and explainability, allowing consumers to make informed choices and understand the potential risks associated with AI-driven technologies. Addressing these challenges requires not only technological solutions but also legal and ethical frameworks that clearly delineate responsibilities and protect consumer rights in an increasingly automated marketplace.

Application of Artificial Intelligence by Companies:

The integration of artificial intelligence (AI) by companies has surged in recent years, with AI being woven into a diverse array of products, services and business processes. Here are some key ways companies are harnessing AI technology:²⁵

1. **Customer Service and Support:** AI-powered chatbots and virtual assistants offer automated, round-the-clock customer support and address common inquiries. AI can analyze customer interactions to detect patterns, anticipate issues and tailor responses.
2. **Personalization and Recommendation:** AI-driven recommendation algorithms suggest products, content and services customized to individual users' preferences and behaviors, enhancing customer engagement, satisfaction and sales.
3. **Predictive Analytics and Forecasting:** AI analyzes large datasets to uncover patterns that inform business decisions, such as demand forecasting, inventory management and risk assessment, helping companies optimize operations, cut costs and improve strategic planning.
4. **Automation and Efficiency:** AI automates repetitive, high-volume tasks like data entry, document processing and routine decision-making, boosting productivity, reducing errors and allowing human workers to focus on more strategic, creative and value-added activities.
5. **Marketing and Advertising:** AI personalizes and optimizes marketing campaigns, from targeted ad placement to dynamic content generation. AI-powered tools analyze user behavior, segment audiences and continuously refine marketing strategies for better performance.
6. **Fraud Detection and Risk Management:** AI-based algorithms swiftly analyze transactions, user behavior and other data to identify patterns indicative of fraud, cybersecurity threats, or financial risk, helping companies protect themselves and their customers from financial losses and reputational damage.
7. **Product and Service Innovation:** AI analyzes customer data, market trends and technological developments to guide the creation of new products, services and business models, enabling companies to stay ahead of the competition and better meet the evolving needs of their customers. While the use of AI by companies offers significant benefits, it also raises important concerns about consumer rights, including privacy, transparency, fairness and accountability. As AI becomes more pervasive in the consumer landscape, there is a growing need for robust regulatory frameworks and industry-wide best practices to ensure that the deployment of these technologies respects and protects consumer interests.

Conclusion:

The rapid rise of artificial intelligence has profoundly impacted consumer rights, bringing both significant benefits and new risks and challenges. As AI becomes more deeply integrated into our daily lives, ensuring strong consumer protections and rights has never been more urgent. Policymakers, regulators, industry and consumer advocates must collaborate to develop comprehensive and adaptive approaches to governing AI use in a way that fosters innovation while safeguarding consumer interests. This requires a multifaceted strategy addressing key consumer rights considerations, including privacy, transparency, fairness, safety and consumer autonomy. By striking the right balance, we can unlock AI's tremendous potential in serving consumers while maintaining their trust, agency and fundamental rights. Achieving this goal is critical not only for protecting individual consumers but also for preserving

²⁵ Nakazato, S., & Squicciarini, M. (2021). *Artificial intelligence companies, goods and services*. <https://doi.org/10.1787/2db2d7f4-en>

the integrity and legitimacy of the AI-powered digital economy as a whole. The path forward will not be easy, as the challenges posed by AI are complex and ever-evolving. However, by embracing a collaborative, forward-thinking and consumer-centric approach, we can ensure that continued advancements in artificial intelligence enhance rather than diminish consumer rights and well-being. Policymakers, regulators, industry and consumer advocates must work together to develop holistic and adaptive approaches to governing AI use in a way that fosters innovation while safeguarding consumer interests. This will require ongoing dialogue, research and a willingness to continuously revisit and refine AI governance frameworks. Ultimately, the goal should be to harness AI's power in service of consumers while maintaining their trust, autonomy and fundamental rights. By getting the balance right, we can unlock the tremendous potential of this transformative technology while ensuring it remains aligned with the needs and values of the people it is intended to serve.

Ongoing education and awareness initiatives will be crucial to empower consumers to make informed decisions about AI-powered products and services. Robust mechanisms for accountability and redress must be established to address instances of AI-related harm or rights violations. As AI continues to evolve, maintaining a flexible and adaptive regulatory approach will be essential to keep pace with emerging challenges and opportunities.²⁶

The rapid rise of artificial intelligence has significantly impacted consumer rights, presenting both opportunities and challenges. As AI becomes increasingly integrated into daily life, it is crucial to establish robust consumer protections. This requires a collaborative effort from policymakers, regulators, industry leaders and consumer advocates to develop comprehensive governance strategies that promote innovation while safeguarding consumer interests. Key considerations include privacy, transparency, fairness, safety and consumer autonomy. Striking the right balance is essential not only for protecting individual consumers but also for maintaining the integrity of the AI-driven digital economy.

The complexity and evolving nature of AI-related challenges necessitate a multifaceted approach. This includes developing adaptive regulatory frameworks, promoting industry self-regulation, enhancing consumer education and fostering ongoing dialogue between stakeholders. Transparency in AI decision-making processes, ensuring algorithmic fairness and protecting consumer data privacy are critical areas that require attention. Additionally, mechanisms must be put in place to address potential AI biases and ensure that consumers retain meaningful control over their interactions with AI systems. By adopting a forward-thinking, consumer-centric approach, we can harness the benefits of AI while mitigating risks and preserving fundamental consumer rights in an increasingly AI-driven world.

²⁶ Uzougbo, N., Ikegwu, C., & Adewusi, A. (2024). Legal accountability and ethical considerations of AI in financial services. *GSC Advanced Research and Reviews*, 19(2), 130–142. <https://doi.org/10.30574/gscarr.2024.19.2.0171>