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Smart Protection: Leveraging AI to Strengthen Consumer Rights in Online Commerce

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Abstract

In the fast-changing digital economy, artificial intelligence (AI) significantly transforms how consumer protection is enhanced. Utilizing machine learning, natural language processing, and predictive analytics, AI technologies can spot fraudulent activities, recognize hazardous products, oversee unfair trading practices, and ensure adherence to consumer rights regulations instantaneously. Tools powered by AI provide tailored risk notifications, automatic dispute resolution, and clear product information, thus enabling consumers to make well-informed choices.[1]

This paper investigates how AI can be incorporated into consumer protection systems, focusing on its ability to enhance regulatory enforcement, foster trust in online commerce, and tackle new challenges in digital transactions. It also addresses ethical concerns, including the reduction of bias, the safeguarding of data privacy, and the importance of accountability, to ensure that AI-based consumer protection is both efficient and fair.

Keywords: Artificial Intelligence (AI), Consumer Protection, Digital Marketplace, Fraud Detection, Predictive Analytics, E-commerce Security, Automated Dispute Resolution, Data Privacy, Algorithmic Transparency, Ethical AI

Introduction

The fast-paced digitalization of commerce has fundamentally changed how consumers obtain goods and services. E-commerce platforms, electronic payment systems, and online marketplaces have introduced unmatched convenience, variety, and accessibility. Nevertheless, this digital shift has also introduced new dangers, such as online scams, counterfeit items, data breaches, and manipulative advertising tactics.

Traditional consumer protection methods—typically relying on human supervision and manual enforcement—are becoming increasingly challenged by the vastness, rapidity and intricacy of the digital marketplace.

Artificial intelligence (AI) provides a groundbreaking answer to these issues. By utilizing sophisticated computational methods like machine learning, natural language processing, and predictive analytics, AI systems are capable of analysing large amounts of data, recognizing unusual patterns, and reacting to

[1] Aditya Nanda Riandi, AI and consumer behaviour: Trends, technologies, and future directions from a Scopus-based systematic review, August 11, 2025, https://www.tandfonline.com/doi/full/10.1080/23311975.2025.2544984#d1e310 (last visited October 10, 2025).

threats instantly. Whether it's spotting fraudulent transactions or ensuring adherence to consumer protection regulations, AI can enhance both preventive and remedial strategies.
Integrating AI into consumer protection frameworks offers great potential for empowering consumers, fostering confidence in online transactions, and promoting fair treatment. Nonetheless, it also brings up significant issues regarding data privacy, algorithmic bias, and accountability.
This article discusses how AI may be used to protect consumers, looks at its possible advantages and disadvantages, and provides ideas for creating a strong and ethical AI-powered consumer protection system.

Integrating Artificial Intelligence with Legal and Ethical Governance[2]:
Although artificial intelligence has enormous potential to improve consumer protection, its application needs to be governed by strict legal and ethical guidelines. Automation gone unchecked can lead to new dangers like algorithmic bias, invasions of privacy or lack of accountability. AI system must *first and foremost* be open and equitable guaranteeing that judgment such as fraud detection or pricing suggestions don't discriminate against any group.
Second, data privacy needs to be the top priority. The Digital Personal Data Protection Act, 2023 of India mandates that consumer data be processed legally, with informed consent and with explicit storage and use limitations. In order to ensure that consumer protection does not compromise privacy, AI system must adhere to these provisions regarding the right to grievance redressal for misuse.
Third, Accountability and Transparency AI decisions that impact customers like pricing alerts, fraud flags or complaint resolutions, ought to be explicable. Platforms must be required by regulators to provide documentation of the ways in which their artificial intelligence models affect customer outcomes, as per regulatory requirements.

The Changing Landscape of E-Commerce:
The e-commerce ecosystem is fueled by algorithms that provide customised recommendation, targeted ads and dynamic pricing which make shopping faster and more personalized but also often obscure key information about what is changing as you, or what you can afford, which leads to an asymmetry of information that results in a loss of trust on the part of consumers, as well as diminished ability of traditional consumer protection mechanisms such as legal notices, customer service hotlines and manual investigations.

AI as a Tool for Consumer Protection[3]
Artificial Intelligence (AI) Technologies such as machine learning, natural language and work as a potential powerful tool offering significant benefits like enhanced fraud detection, customized services, and expedited complaint handling, but also presenting risks like prejudice, deceit, lack of openness, privacy risks, and the challenge of proving liability for damages caused by AI.

[2] Shivam Gaur, *The Legal and Ethical Implications of Artificial Intelligence in Indian Corporate Governance,* August 24, 2024, Manupatra Articles, https://articles.manupatra.com/article-details/The-Legal-and-Ethical-Implications-of-Artificial-Intelligence-in-Indian-Corporate-Governance (last visited October 10 2025).
[3] Dr Nivash Jeevanandam, *INDIAai*, *Exploring consumer rights in the age of AI*, March 19,2024, https://indiaai.gov.in/article/exploring-consumer-rights-in-the-age-of-ai (last visited November 1, 2025).

It holds enormous promise for protecting consumers, identifying hidden patterns and responds to risks before consumers are harmed. The key application explained in details:

1. **Fraud Prevention and Detection**
One of the most sensitive concerns in online commerce is fraudulent activity. Artificial Intelligence (AI) uses advanced machine learning models to analyse and can monitor vast data transactions in real time, identifying anomalies that may indicate fraudulent activity. Nowadays Credit Card companies use AI-powered system systems to block unauthorized payments instantly, protecting both consumers and merchants.[4]
2. **Personalized Warnings and Alert**
Artificial Intelligence (AI) generates notifications through messages that inform consumers of something unusual or risky happening based on the current activities of a consumer’s purchases, location or preferences and protect by cautioning before harm. It monitors product safety notices with consumer’s purchasing history.
3. **Enhanced Transparency**: It is a critical benefit of integrating AI tools into consumer protection systems. It ensures that both consumers and regulators can clearly understand how decisions are made, fostering trust and accountability.
4. **Unfair Practice Identification**[5]: Artificial Intelligence (AI) identifies patterns and behaviours in business operations, marketing or transactions that constitute unfair practices such as:
   - Misleading advertising or hidden fees
   - Unbalanced Contracts terms
   - Price Discrimination or predatory pricing
   - Manipulative website design (dark patterns)
5. **Data Privacy and Security:** The large amount of personal data collected by online platform, privacy protection is a major concern. AI-based cybersecurity tools can identify vulnerabilities, detect breaches and automatically mitigate risks. Artificial Driven consent management system can provide consumers more control over how their data use, stored and shared-supporting compliance with privacy regulations such as the General Data Protection Regulation (GDPR).[6]
6. **Automated Dispute Resolution:** Artificial- powered chatbots and virtual assistants can streamline consumer complaints handling dispute resolution. The system uses Natural Language Processing (NLP) to interpret customer grievances and suggest appropriate remedies or escalates cases to human agents when necessary. This not only speeds up resolution but also ensures consistent, fair handling of consumer issues.[7]

[4] Kanakkupillai, *Consumer Protection in India: Essential Needs and Methods*, August 23, 2023, https://www.kanakkupillai.com/learn/consumer-protection-in-india-essential-needs-and-methods/ (last visited November 1, 2025).
[5] Kanakkupillai, *Consumer Protection in India: Essential Needs and Methods*, August 23, 2023, https://www.kanakkupillai.com/learn/consumer-protection-in-india-essential-needs-and-methods/ (last visited November 1, 2025).
[6] Osano Staff, *Customer Data Privacy: Why It’s Important and How to Protect Consumer Data*, July 5, 2025, https://www.osano.com/articles/customer-data-privacy (last access on November 5, 2025).
[7] Consumers International, can we trust AI chatbots? Results revealed from our experiment, April 23, 2024, https://www.consumersinternational.org/news-resources/news/releases/can-we-trust-ai-chatbots-results-revealed-from-our-experiment/ (last access on Nov 5,2025).

Indian Legal Provisions that Protect Consumers:

The legal provisions that protect consumers in online commerce and can be strengthened through artificial intelligence (AI) applications:

1. The main legal protecting consumer rights provides redressal through District, State and National Commissions that product liability and e-commerce with covering AI-enabled goods/services deals by Consumer Protection Act, 2019.
2. The law ensures accurate weights, measures and labelling on goods deals by Legal Metrology Act, 2009.
3. The Act deals with food safety and quality through FSSAI deals with Food Safety and Standard Act, 2006.
4. The act protects consumers in online transactions and against cyber fraud deals with Information Technology Act,2000.
5. The laws that protect buyers when goods are defective or not as described by Sales of Goods Act, 1930.
6. To protects homebuyers from delays, fraud, or misrepresentation by builders and developers must register projects and disclose all details by Real Estate (Regulations and Development) Act, 2016 (RERA).
7. The laws ensure fair competition in the market and prevent monopolistic, restrictive, or unfair trade practices that harm consumers by Competition Act, 2002.
8. The consumers protect from AI-generated Deepfakes, Cybercrime, automated financial fraud, violation of data privacy secure by Digital Personal Data Protection Act, 2023 (DPDP Act).

Challenges and Ethical Considerations:

While Artificial Intelligence has great promise. It also brings up issues regarding bias in algorithms, misuse of data and insufficient clarity in automated decision processes. If left unregulated, AI technologies could unintentionally disadvantage some consumers or influence buying habits. Hence, it is crucial to incorporate ethical governance structures and human supervision to guarantee that AI application prioritize the well-being of consumer instead of solely benefiting corporation.[8]

Conclusion:

Artificial Intelligence (AI) has become a revolutionary force in advancing online commerce trust and consumer protection. Its application can significantly improve the digital consumer experience, from fraud prevention to equitable pricing and effective dispute resolution.

However, AI’s advantage won’t be fully realized unless its application is directed by moral principles, openness and a dedication to justice.

[8] Kanakkupillai, *Consumer Protection in India: Essential Needs and Methods*, August 23, 2023, https://www.kanakkupillai.com/learn/consumer-protection-in-india-essential-needs-and-methods/ (last visited November 1, 2025).