Safeguarding against AI exploitation in e-commerce investment management

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Abstract Artificial intelligence (AI) is increasingly vital in e-commerce, especially investment management. AI can enhance decision-making processes, risk analysis, and trend forecasting. However, legal aspects must be considered to prevent abuses and ensure the legality and ethics of AI use in investment management. Data collection and analysis are crucial stages in investment management. Compliance with data protection legislation is essential when using AI for automated decision-making in investment processes. Ethical considerations must be considered as these decisions can impact individuals' financial interests. Therefore, it is crucial that such systems are transparent and adhere to ethical standards. Determining who is responsible for the outcomes of AI decisions made in investment management is also essential. Software developers, system operators, and financial advisors may use AI to support their decisions. However, using AI can make them vulnerable to cyberattacks and affect the security of financial operations. Therefore, it is crucial to develop systems with high data protection levels and check them for vulnerabilities. Investment management in e-commerce may have an international dimension, which raises questions about compliance with international standards and regulatory requirements in AI. Artificial intelligence in investment management in e-commerce offers numerous opportunities to improve process efficiency and accuracy. However, it is crucial to ensure that such applications comply with legal norms, ethical principles, and security requirements. Only this approach will maximise AI's benefits in investment management while ensuring the legality and ethics of technology use.

Keywords: risks, legal aspects, ethical norms, Artificial Intelligence, medical insurance

1. Introduction

Artificial intelligence and machine learning have become ubiquitous in the financial world. They are mature technologies that are deployed in various scenarios. This trend will continue as more data, computational power, and better algorithms become available, leading to a “golden age” of financial AI in the next decade.

T. Migliore, co-founder of MDOTM Ltd (The Four Stages of AI Maturity, 2024) notes, that financial institutions are entering a new investment paradigm where fundamental and quantitative approaches can converge, thanks to the increasing ubiquity of technological innovations and the embrace of AI by more professionals. On the other hand, it will involve execution, computation, and data-driven learning. On the one hand, the alphabet of investments will be a language that combines human intuition and experience with the power and precision of machine learning methods. Portfolio managers must adequately understand and effectively use the increasing prevalence of AI advantages. The race has only just begun.

AI can significantly influence portfolio management strategies, creating legal and ethical dilemmas regarding accountability, transparency, and the balance between human and machine risk. Therefore, it is important to consider the potential impact of AI on portfolio management strategies. The study aims to improve understanding of the abuse problem when using artificial intelligence in e-commerce investment management.

Artificial intelligence as an asset management tool becomes a powerful means for investment companies to achieve market efficiency goals and attract more clients (Muzychenko et al., 2023).

Before the advent of artificial intelligence, the investment process typically involved market research, analysis of company financial reports, evaluation of macroeconomic factors, studying the history of trading stocks and other financial instruments, and using various analytical methods and strategies to make investment decisions. This included technical analysis and fundamental analysis, as well as considering personal financial goals and risks.
In traditional quantitative investing, portfolio allocation decisions (Beccalli et al., 2020) are usually based on a well-defined investment strategy. Portfolio managers develop and implement investment strategies to maximise expected returns for client portfolios. The introduction of advanced artificial intelligence algorithms (Sarker, 2022) allows intelligent machines to automatically review and update investment strategies, learning from the past.

Developers of AI software for management require a new approach to measuring effectiveness, assessing competence, and distributing incentives. The ethical and legal implications of automation’s impact on behaviour in the financial market necessitate serious study. Therefore, this aspect of market automation deserves attention (Hurlburt et al., 2009). Discussions of ethics and legal aspects in financial markets and financial services usually concentrate on the professional obligations of financial managers, brokers, investment advisors, and traders. Ethical codes, professional rights, governmental regulations, and exchange rules govern these obligations. However, in the new era, intermediaries such as automated agents in the global automated mechanism (Davis et al., 2012) have become increasingly important.

Scientists illustrate a new dimension that automation and artificial intelligence (AI) bring to financial investments. Compared to old-school quantitative financial investing, where a human has to devise and create an investment strategy (Ottaviani, 2000), with AI, the machine continuously adapts the investment strategy based on market conditions and fluctuating indicators. Humans focus solely on developing the suitable machine (i.e., to develop and ultimately refine the machine learning process). Due to this shift in the role of developers in financial modelling, instead of developing the strategy, programmers develop the machine that will ultimately develop its strategy, and their work is primarily evaluated not in terms of productivity (profitability) but in terms of reliability, stability, and system consistency.

Artificial intelligence involves the study of brain function, thinking, perception, decision-making, and other related aspects to develop simulation systems capable of learning and adaptation (Bawack et al., 2022).

Various models of the legal status of AI are proposed in scientific literature, ranging from granting nearly equal rights to humans to denying any legal personality. However, endowing AI with legal personality elicits a mixed reaction. It is emphasised that granting legal personhood to artificial intelligence will create the possibility of transferring legal liability. AI lacks motivation and legal interests and cannot resist such liability. The legal and social consequences of such a practice, as well as the extent of abuses by all interested parties - government officials, AI industry representatives, developers, owners, or users of artificial intelligence - are uncertain and require further investigation (Mazzini & Bagni, 2023).

The most reliable method of legal regulation for artificial intelligence is a conservative approach. This involves addressing questions about AI’s legal status and liability for its actions using traditional legal institutions (Cheserman, 2020). Artificial intelligence does not fall under any of the mentioned categories. It represents a complex of technological solutions that can be attributed to the fields of copyright (computer programs, databases), related rights (databases), patent law (inventions), and trade secrets (know-how).

AI technologies refer to a range of technological solutions, including artificial intelligence and additional technical solutions related to patent law (Zhang et al., 2021). The legal status of AI can be developed through various legal regimes, but treating it as a complex object of intellectual property is the most promising approach. Artificial intelligence developers hold ethical and legal responsibility for justifying decisions that may result in death or financial losses (Monroe, 2018).

Machine legal ethics in investments is inherently linked to algorithms that develop, propose, or implement new investment strategies. Hill (2015) states that an algorithm is a mathematical construct with “a finite, abstract, effective, complex control structure that achieves a specified goal under given conditions.” However, as asserted by Mittelstadt et al. (2016), it does not make much sense to consider the legal aspects and ethics of algorithms, as discrepancies between developers and the functioning of algorithms and our understanding of their ethical motives can have serious consequences, affecting individuals as well as groups and the broader society.

In standard economic conditions, an investor is risk-averse, while an investment consultant is neutral. Financial products are items of trust, significantly if the client cannot accurately predict the expected income. Three main types of asymmetry influence this in the investment market (Wet, 2004):

1. Information asymmetry occurs when one party to a transaction has more information than the other. For example, an investment could mean that a company has more information about its financial performance than potential investors. This can lead to unfair trading conditions and reduced market confidence.
2. Motivation asymmetry: This is a situation in which different parties to a transaction have different motives or interests. For instance, the company’s managers may be motivated to maximise their returns at the expense of investors, which can lead to conflicts of interest and mismanagement.
3. Risk asymmetry: This is a situation in which one party to a transaction has more detailed information about the risks than the other party. In investments, it can refer to situations where investors need full information about the potential risks of a particular project or company.

Asymmetries of this type can impact the efficiency of the investment market and create risks for market participants. Understanding these aspects can assist investors and regulators in improving strategies and policies to mitigate the negative impact of asymmetry on the market (Aggarwal & Mazumdar, 2008).
Integrating artificial intelligence into the investment process can be a valuable tool, provided that it is managed and integrated to support specific activities with an awareness of the legal aspects to prevent abuses in this area. Several countries, including the USA, the UK, the European Union, China, Japan, and South Korea, have developed regulatory acts and project documents to govern the development and use of AI. These policies and strategies aim to regulate the relations related to AI (National AI policies & strategies, 2022). It is important to note that quantity does not necessarily indicate quality. The constant multiplication of regulatory acts, competent authorities, specialised bodies, and expert groups related to artificial intelligence makes it difficult to track numerous changes, proposals, and initiatives increasingly emerging in this sector of expert-legal and normative work (Veale, 2022).

2. Materials and methods

Several methods of obtaining scientific knowledge were used in writing this paper. Firstly, the historical method was employed to study the historical aspects of using artificial intelligence for investments and the general moral-legal norms of AI use. Based on the results obtained, the logical method was performed to formulate theses about the further development of this sphere.

Additionally, the method of analysis was applied in writing this article. This study examines the issues surrounding using artificial intelligence in investments and e-commerce. It focuses on the widespread adoption of AI and its advantages in the investment sphere. The study identifies several problems, including unfair competition, violations of rules for collecting and processing personal data, use of personal information, intrusion into privacy, complex risk systems, and unpredictability of results.

Using the forecasting method, we implemented artificial intelligence to identify potential human rights violations in the e-commerce investment sphere.

Additionally, we employed the synthesis method to comprehensively understand the problematic issues related to human rights, artificial intelligence, and the investment process in e-commerce. These issues require legal regulation at the international level to prevent abuses in AI use.

3. Results

The challenges posed by the intricate coordination of expert and regulatory activities in AI in recent years are an unavoidable consequence of establishing comprehensive regulations for developing and using artificial intelligence and related technologies. The swift progress of the AI industry necessitates that leading nations allocate substantial administrative and financial resources to tackle the challenges of establishing a practical regulatory framework for the sustainable growth of their national artificial intelligence sectors.

Some possible abuses of AI in e-commerce investment include:

1) Market manipulation: The use of AI algorithms to manipulate stock prices or other financial instruments.
2) Fraud: Using algorithms to create fake objects or false information to defraud investors.
3) Front-running: Using information obtained before other market participants to gain an advantage in trading.
4) Data overfitting: The use of overly complex models that are adapted to past data but perform unpredictably on new data.
5) Market impact: Using artificial intelligence for fast trading can lead to significant changes in financial markets, harming other market participants.

Investment market regulators monitor these issues and develop appropriate legislation and rules to prevent or mitigate their impact. Government or quasi-governmental bodies establish and oversee financial markets to ensure stability, transparency, and efficiency. Some of the most well-known investment market regulators include the Securities and Exchange Commission (SEC) in the USA, the Financial Conduct Authority (FCA) in the UK, the European Securities and Markets Authority (ESMA) in the European Union, the Securities and Exchange Board of India (SEBI) in India, the China Securities Regulatory Commission (CSRC) in China, the Securities and Exchange Commission of Pakistan (SECP) in Pakistan, and the Swiss Financial Market Supervisory Authority (FINMA) in Switzerland.

Regulatory authorities establish rules for financial institutions, investment companies, and other market participants to protect investors and ensure market integrity. These rules may vary depending on the country and regulatory authority. Investment companies are required to provide transparency regarding their use of artificial intelligence in their activities, including algorithms, models, and data sources. Additionally, they must adhere to ethical and responsible practices, monitor their activities, and provide regular reports.

Many countries are gradually developing and adopting legislative acts related to artificial intelligence. However, today, these acts will most likely have general provisions regarding the use of artificial intelligence technologies and their impact on various spheres of activity rather than specific requirements regarding investment activities.

The Ad Hoc Committee on Artificial Intelligence (CAHAI) assessed the prospects for developing artificial intelligence technologies and their legal regulation in Europe and other regions. According to their assessment, artificial intelligence...
significantly impacts four areas of fundamental human rights: respect for human dignity, personal freedom, equality, non-discrimination, and solidarity, as well as socio-economic rights (Towards Regulation of AI Systems, 2018).

The jurisdiction of laws governing artificial intelligence extends beyond its development origin to include any AI system deployed, sold, or operated within the European Union.

The proposed EU Artificial Intelligence Act aims to establish regulatory frameworks solely for those AI systems that pose the most significant risks to society.

The European Commission's proposal for the Artificial Intelligence Act, published in April 2021 (Figure 1), is the world's first legislative act solely focused on artificial intelligence. The drafters of the bill state that appropriate codes of conduct are sufficient for other AI systems. Article 6 of the draft Act categorises as high-risk those artificial intelligence systems that meet both of the following conditions:

1) Artificial Intelligence (AI) is a system designed to be used as a part of a product that ensures its safety or as a product itself, which is regulated by the EU legislation harmonisation regulations listed in Annex II to the Law;

2) A product in which an AI system is a part responsible for safety, or which is itself an AI system, must undergo a third-party conformity assessment to place this product on the market of goods and services following the regulatory acts of harmonisation of the legislation of the European Union listed in Annex II to the Law.

![Figure 1](https://www.malque.pub/ojs/index.php/mr)

**Figure 1** The EU AI law uses an approach to regulating the risk of AI systems based on their level of risk.

*Source: Consultancy.eu (2023)*

The Artificial Intelligence Act is a comprehensive regulatory instrument that does not focus on any specific sector. Its impact on financial services is likely to be significant. As the first regulation of its kind, it is likely to serve as a primary reference for future AI rules in various jurisdictions worldwide. Therefore, the importance of the AI Act cannot be overstated.

The European Union (EU) has taken a risk-based approach to artificial intelligence (AI), assessing risks in terms of use cases and sectors and ensuring compatibility with existing EU regulations, including the General Data Protection Regulation (GDPR). Article 52 provides additional guidance for “systems intended to interact with natural persons”. At the same time, Article 69 recommends that operators of all other types of AI voluntarily adhere to the same principles as high-risk systems to avoid unregulated AI systems.

The role of financial services in the Law could be more precise. Although finance is listed as one of the “high-risk sectors” in the explanatory memorandum, a clear list of high-risk systems in Appendices II and III of the AI Law does not include financial services. The AI Law directly mentions credit and financial institutions in several articles. The Law explicitly refers to credit rating as a high-risk program, but “credit rating” is not clearly defined in the regulatory act. The AI Law defines “access to financial resources or essential services such as housing, electricity, and telecommunications services” based on credit rating. This interpretation is broader than commercial organisations’ typical credit assessment to determine credit or credit card eligibility.

Furthermore, AI systems listed in Appendix III of the Law are considered high-risk systems. AI systems are used in various vulnerable areas, such as biometric identification, critical infrastructure management, education, employment, provision of government services, law enforcement, migration management, judiciary, and democratic processes. However, the draft Law explicitly excludes the regulation of combat robots and intelligent systems used in military conflicts (Paragraph 3 of Article 2).

The development and use of artificial intelligence have been the subject of comprehensive regulation through a series of acts and documents preceding the EU AI law project. These include the European Ethical Charter on the Use of Artificial Intelligence in Judicial Systems 2018 (Ethical Charter on the Use of Artificial Intelligence in Judicial Systems and their Environment), the European Ethical Charter on AI (European ethical, 2018), adopted within the framework of the Council of
Europe, a document titled “White Paper on Artificial Intelligence - a European approach to excellence and trust” 2020, as well as a series of resolutions and other acts defining the legal regime for the use of artificial intelligence in specific areas of activity.

The European Ethical Charter on AI was adopted at the Council of Europe’s European Commission for the Efficiency of Justice (CEPEJ) plenary session in December 2018. The article outlines five fundamental principles for using artificial intelligence in judicial systems and related fields. These principles include respect for fundamental rights, non-discrimination, quality and safety, transparency, impartiality, fairness, and user control (Akimov et al., 2021).

The European Commission’s “White Paper on A*”, published in February 2020, highlights the importance of constructing “ecosystems of excellence” and “ecosystems of trust” for the successful implementation of the European AI Strategy. These ecosystems will benefit the entire European society.

Despite the valuable data that artificial intelligence can provide - predictive and operational - portfolio managers will always remain responsible for investment decisions.

According to Forrester, large corporations, including central banks and financial institutions, will invest around $64 billion by 2025 to upgrade their processes using AI software.

It is demonstrated by the extent of AI integration in financial institutions, as revealed by a recent study carried out by Stanford University in partnership with Google, Bloomberg, and McKinsey (Figure 2).

![Figure 2 Level of IS implementation among financial institutions.](Source: Michael Chui (2021))

The research indicates that the financial industry has successfully adopted artificial intelligence in risk management processes and innovative products.

Capital and portfolio managers highly value asset class and sector positioning indicators, scenario, and regime analysis, which use artificial intelligence to identify new diversification opportunities at each market phase.

According to Figure 3, the estimated size of the e-commerce market is $8.80 trillion in 2024 and is projected to grow at a CAGR of 15.80% during the forecast period (2024-2029), reaching $18.81 trillion by 2029.

The General Data Protection Regulation (GDPR) has had a global impact, making the AI law a universal benchmark for defining ethical AI use, regardless of geographical boundaries. The financial sector is associated with AI for fraud detection, algorithmic trading, risk analysis, and improving customer interaction, making the Law a double-edged sword.

Financial institutions must ensure their AI systems comply with the Law’s directives, particularly for high-risk systems like credit scoring. The AI law highlights the importance of transparent AI models that can be interpreted and mandates using unbiased, high-quality data. Failure to comply may result in financial sanctions (Hutsaliuk et al., 2020).

The upcoming European AI law demonstrates a proactive approach to AI management, striving to balance innovation with ethics. In the financial sector, this Law applies not only to regulatory compliance but also presents an opportunity to reconsider the principles of providing financial services in the age of AI.
According to analysts at Grand View Research, the global AI in asset management market was valued at around $2.6 billion in 2022 and is expected to expand at a cumulative annual growth rate of 24.5% from 2023 to 2030.

The transition of the asset management sector to artificial intelligence is already underway: 62% of capital management firm professionals in Forrester’s Future Fit Survey anticipate increasing spending on new technologies such as AI tools.

![E-Commerce Market Size](https://www.malque.pub/ojs/index.php/mr)

**Figure 3** Size of the e-commerce market during the forecast period (2024-2029).

*Source: Vivek Sikaria et al. (2024)*

Additionally, according to data from the London-based company Market Makers, which specialises in market analytics and AI research, nine out of 10 hedge fund traders surveyed by 50 leading hedge funds planned to use artificial intelligence in 2023 to achieve portfolio profitability goals.

4. Discussion

The analysis allows us to conclude that at the moment a number of fundamental problems of legal regulation of the field of artificial intelligence remain unresolved. Perhaps one of the results of the large-scale normative work organized by the largest states of the world will be the finding of reliable approaches to solving those complex theoretical and legal issues that fill the subject of legal aspects of artificial intelligence and related technologies. Initiatives by international organizations such as WIPO (World Intellectual Property Organization) and the OECD (Organization for Economic Cooperation and Development) can also play a role in this process.

Further development of cooperation with the private sector and business representatives. American business practice, the experience of multilevel cooperation of the European Union and the pace of breakthrough scientific and economic development of China show that the most rational approach is to cooperate as closely as possible in the development of regulation with representatives of large businesses, who are the main national investors in the innovative economy and AI technologies, as well as easing the tax burden and bureaucratic burden in relation to high-tech startups (Kussainov et al., 2023).

The European Parliament was ahead of the United States and Great Britain. We do not yet know what the final text of this law will include (it will come into force in 2025), however, the purpose of this law is to ensure the possibility of further development of AI based on common rules, with a reduction in risks to humanity, that is, with a focus on human rights. They believe that there is no need to fight AI, it is necessary to "prescribe the rules" for the joint existence of humans and AI. In particular, the law should address the following main issues, such as:

1) bans on certain areas of AI use. For example, this applies to collecting images of faces from open sources to create a database, manipulating human behavior against their will, and other areas.

2) special regulation for particularly risky areas of AI use. Here, some compare AI to "atomic bomb." After all, AI is a really big breakthrough, but it can cause irreversible consequences.

3) transparency of AI activities, no discrimination.

4) regulation of the AI market as a whole.

This law will apply to the entire territory of the EU. The GDPR (General Data Protection Regulation) has become the gold standard for personal data protection, including AI.
In this connection, for example, Italy officially banned ChatGPT due to its violation of the GDPR, namely, due to the violation of conversations between users of people’s payment information (it concerned users of the paid version). China, in turn, requires a preliminary security check of AI-based services, only then giving permission to work on its territory. And such caution to AI in China is not the first year, earlier China banned the use of Tesla cars in places of strategic importance for the state.

Given this, AI requires controls and restrictions.

One of the most sensitive topics in AI is authorship. Since the very result of AI work is not created by humans, but the very result of its work is very often an object of intellectual property.

Copyrights arise from the moment they are created, that is, as soon as you start writing a book, even if you haven’t finalized it yet, your copyright to it is already valid, as is the case with music and other intellectual property objects. And here the question arises: does AI have copyright rights? Or the company that created AI?

In the United States, representatives of the creative sphere (writers and other creators) independently call on (D.Grant, 2023) the US Congress to prohibit the protection of copyrights to works of art, the “author” of which is AI. In turn, the US Copyright Office already has an answer to this, namely, they have a practice of refusing to register rights to an intellectual property object that was created using AI. The executive director of OpenAI (which became known thanks to ChatGPT) also demands that the government regulate AI, which will help the coexistence of the real and technical worlds. He also supports the protection of AI intellectual property rights, but believes that it is necessary to create a separate agency for AI (Kostiukievych et al., 2020; Khatniuk et al., 2023).

The UK has taken a completely different side in regulating this issue - they protect the results of AI work by copyright.

And despite all the concerns, initiatives such as a letter from the future of Life Institute calling for suspending the development of artificial intelligence systems more powerful than ChatGPT-4, the field of AI continues to develop. States, in turn, try to minimize risks in any way, even if they do not have a single law regulating AI. For example, the White House this year ordered (The White House, 2023) Amazon, Anthropic, Google, Inflection, Meta, Microsoft and OpenAI to label their products as AI - related, as well as report on AI capabilities.

Taking into account all the problems and already developed means of influencing AI, it becomes clear that AI regulation is still an open issue that requires the fastest and most global solution. And all parties (both businesses and users) demand and understand the importance of regulating AI at the level of a law that should address not only issues of intellectual property or market relations, but also global national security and humanity.

Legislative regulation will help businesses not to lose the technological opportunities that AI provides, but at the same time not to violate people’s rights, and most importantly, it will provide certain restrictions on AI and, accordingly, minimize risks.

Regarding the international level of regulation of AI and related technologies, it seems most important to note the urgent need to develop global cooperation in this area. In the course of the study, the growing severity of competition in the global technology market was noted, both among private companies and among states. In such conditions, the risk of reducing the level of protection of human and civil rights and freedoms, as well as the importance of fundamental humanitarian values, increases, since states and companies are increasingly forced to be guided solely by economic considerations (Jiang et al., 2019; Potwora et al., 2023). In our opinion, preventing the abuse of artificial intelligence (AI) in e-commerce investment management is crucial to maintaining the trust and integrity of the financial system. Here are some strategies to prevent misuse:

1) Transparency and clarity:
   Ensure transparency in the use of AI algorithms and provide explanations for decisions made. Clear information about how AI is used in investment management can help prevent abuse by promoting stakeholder accountability and understanding.
2) Ethical recommendations and standards:
   Establish ethical recommendations and standards for using artificial intelligence in e-commerce investment management. These guidelines should address issues such as fairness, accountability, transparency, and privacy to prevent unethical behaviour and abuse of AI technologies.
3) Regular audits and monitoring:
   Conducting regular audits and monitoring of AI systems to identify anomalies, biases or unethical behaviour. It helps to identify and address potential breaches early before they become uncontrollable.
4) Data privacy and security measures:
   Implementing robust data privacy and security measures to protect sensitive information AI algorithms use. It includes complying with relevant data protection regulations and implementing encryption, access control, and other security measures to prevent unauthorised access or misuse of data.
5) Human supervision and intervention:
   Incorporating human supervision and intervention into AI-driven investment management processes. While AI can automate many tasks, human expertise is essential to identify and resolve issues that AI may overlook or misinterpret.
6) Training and education:
Ensure employees and stakeholders managing e-commerce investments are trained to use AI technologies responsibly. It includes raising awareness of the ethical considerations, potential biases, and best practices for using AI in investment decisions.

7) Collaboration and industry standards:
Collaborate with industry peers, regulators, and experts to develop and adhere to industry-wide standards and best practices for the responsible use of AI in investment management. These collective efforts can help establish norms and principles to prevent misuse and promote ethical behaviour in the industry.

By implementing these strategies, e-commerce investment management firms can mitigate the risks of abuse associated with using AI technologies and ensure that AI is used responsibly for the benefit of investors and society.

5. Conclusions

Regarding international regulation of AI, the research process identified a growing competitiveness in the global AI technology market among private companies and states. It expands the risk of reducing the protection of human rights and freedoms and the significance of fundamental humanitarian values. It is important to note that states and companies are increasingly driven solely by economic considerations. Competition in the development of artificial intelligence should contribute to the overall prosperity of humanity rather than becoming a catalyst for the social-humanitarian crisis of modern society. The development of universal international legal regulation of the development and use of AI based on common humanitarian values should become an integral part of modern trends in the legal aspects of artificial intelligence.

Regarding the “White Paper on AI” and the establishment of an ecosystem of excellence to facilitate the development and implementation of artificial intelligence in the economy and public administration throughout the European Union, creating a trustworthy ecosystem should guide the ethics of reliable AI. It aligns with the Ethics Guidelines for Trustworthy AI, developed by the High-Level Expert Group on AI. This document outlines the seven essential characteristics that should be considered when developing and implementing AI systems throughout their lifecycle:

- human mediation and supervision,
- technical robustness and security,
- privacy and data management,
- transparency,
- diversity,
- non-discrimination and fairness,
- social and environmental well-being,
- accountability.

The strategic documents cited emphasise the European Union’s main objectives in artificial intelligence. These objectives include ensuring an equitable distribution of benefits from the use of this technology, minimising risks for all participants in the development and exploitation of AI systems, and building a stable, reliable, and highly efficient artificial intelligence industry. To achieve these objectives, citizens, businesses, and states must be involved in controlling the safety of AI systems.

Ethical considerations
Not applicable.

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