

## THE PRESENT AND FUTURE OF AUDITING IN THE ERA OF MODERN TECHNOLOGIES AND ARTIFICIAL INTELLIGENCE: A CASE STUDY OF ERNST & YOUNG (EY)

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### Abstract

this research examines the wide-ranging applications of artificial intelligence (AI) in the field of auditing through a descriptive-analytical approach. It presents the current and future states of auditing as influenced by modern technologies and AI, incorporating a case study that analyzes data from EY, a leading global auditing firm. The findings highlight the positive impacts of AI, including reduced risk in audit processes, improved fraud detection, and enhanced audit quality. Consequently, the study strongly recommends that auditors adopt AI applications in their work.

**Keywords:** Current Status, Future, Auditing, Artificial Intelligence, EY

### Introduction

Amidst the accelerating pace of digital transformation and innovation in the financial sector, big data analytics and artificial intelligence technologies have emerged as effective tools. These technologies aid institutions and companies in adapting to the latest prevalent trends and meeting the constantly changing compliance requirements. Automation of financial services, such as fraud detection operations, anti-money laundering efforts, compliance auditing, governance, and financial investigations, has become one of the most significant solutions that have made a tangible change in the operations of global financial institutions.

Detecting, reporting, and reducing financial fraud represent some of the most notable practical applications of big data analytics augmented by artificial intelligence in the financial system. The rate of cybersecurity threats has significantly increased over the past few years, due to the growing reliance on modern technologies. However, artificial intelligence technologies facilitate the analysis of vast volumes of daily transactions within minutes, thereby instantaneously identifying suspicious financial activities and aiding regulatory bodies in investigating potential money laundering cases. Furthermore, big data analytics and artificial intelligence technologies enhance traditional practices that have been applied over the years and enable institutions to deliver greater value to their clients by providing regulators with the necessary tools and advanced infrastructure.

In light of the significant pressures currently faced by auditing firms to improve auditing processes, artificial intelligence technologies assist in analyzing larger data sets, which helps in identifying errors and allows auditors to focus on high-risk areas during the auditing process.

The significant advancements in artificial intelligence technologies have achieved considerable successes across various sectors broadly reflecting on the productivity of these sectors in various directions. Examples include sales, marketing, service provision of all kinds, engineering, medicine, and healthcare, where artificial intelligence has had a significant impact on increasing productivity, reducing costs and time, enhancing effectiveness, increasing revenues, and the accuracy of planning and forecasting.

The auditing profession is not isolated from this technology and has been at the forefront in benefiting from the great advantages provided by artificial intelligence in various aspects. Artificial intelligence has aided the auditing activity in increasing productivity and efficiency, improving audit quality, and reducing time, which has allowed the auditor to focus on important matters entrusted to them with the help of artificial intelligence. This has made the process of risk identification faster, easier, and more accurate, the selection of samples more systematic and precise, and the planning of audits and the use of previous data from work papers and reports easier and more convenient, conducting analyses and comparisons with exceptional speed.

Building on the aforementioned, we pose the primary question of the study as follows: What is the necessity for the auditing profession to use artificial intelligence applications in the future to enhance its quality?

To address the study's problem, we will attempt to answer the following sub-questions:

- What role do artificial intelligence applications play in enhancing the quality of the auditing profession?
- What is the future and challenges of applying artificial intelligence in the auditing profession?
- What is the reality of EY Global Auditing Company's use of artificial intelligence applications to detect fraud risks and enhance audit quality?

### **Study Hypotheses:**

This study is based on the following hypotheses:

- The use of modern technologies and artificial intelligence enhances audit quality.
- The application of artificial intelligence in the auditing profession faces several challenges.
- Integrating artificial intelligence at the global auditing firm EY has significant benefits in detecting fraud and improving audit quality.

### **Significance of the Study:**

The significance of this study lies in its attempt to explore the reality and future of the auditing profession in light of adopting artificial intelligence applications, which leads to improved efficiency and quality, as well as detecting fraudulent operations.

### Firstly: The Role of Artificial Intelligence Applications in Enhancing Audit Quality

1. **Using Artificial Intelligence in the Auditing Profession:** Artificial intelligence can facilitate the auditing process, as it helps perform many time-consuming tasks more efficiently. An anonymous or remote auditing conceptual pathway, the Supreme Financial and Accounting Control device in Nepal is currently planning to implement artificial intelligence tools to assist in audit work, including:
  - **Robotic Process Automation (RPA):** Many repetitive audit tasks can be performed more efficiently using RPA technology. After uploading data from the entities under supervision to the Supreme Financial and Accounting Control system, RPA can identify discrepancies and outliers that human auditors can then address. For example, withheld taxes on payments are deducted at a specified rate (1). If these payments are made without these specified tax deductions, the RPA technology sends this information, allowing auditors to conduct further investigation. The power of automated technologies can also be harnessed for multivariable factorization and programmed to provide alerts to diverse stakeholders.
  - **Enhanced Research Tools:** Risk assessment is a fundamental audit activity, and the Supreme Financial and Accounting Control device in Nepal allocates audit resources based on the risk level (2).

Artificial Intelligence (AI) algorithms can be utilized to categorize entities and group them while an AI-designed risk engine can calculate a score based on the increasing nature of risks. The risk engine can be programmed to consider various criteria such as relative importance, volume of transactions, their category, sensitivity, complexity, and classification of the entities under supervision, aiding in resource allocation.

Furthermore, AI helps overcome the inherent limitations in audit sampling by using various control points to analyze and categorize transactions as high, medium, or low risk.

The use of AI algorithms for setting control points enables one-click audits, allows for rapid searching of high-risk transactions, and can provide alerts to auditors (3).

Similarly, enhanced research tools are equally useful in identifying high-value purchases and geographic spatial analytics. Search enhancement is also effective in revenue audit processes, where AI can quickly identify instances of tax arrears and anomalies, such as returns showing recurring losses, negative gross and net profit ratios, and different tariff rates applied to similar goods.

- **Artificial Neural Network:** Artificial neural networks recognize and store data or transaction patterns, and the Supreme Audit Institution (SAI) in Nepal is developing a predictive model based on specific issues or observations identified in previous audits, such as cost and time overruns, procurement law inconsistencies, incorrect tax calculations, unauthorized government grant disbursements, and unusual expenses, to detect similar cases (4).

In this context, the Supreme Audit Institution in Nepal will use Optical Character Recognition to automate the extraction of some fixed field information from documents in various formats and will use algorithms that reconcile revenue collection data to assist in deriving audit conclusions.

- **Information Extraction and Data Mining:** AI can be used to collect, aggregate, extract, and analyze government revenue and expenses stored in various systems. Algorithms can also support import and export data from integrated systems to quickly identify anomalies (5).

For example, the Supreme Audit Institution in Nepal could use AI to search for goods catalog prices published by producers and compare them with government purchase prices. Similarly, company sales information can be verified by applying data mining techniques to social media or relevant websites.

- **Natural Language Processing:** These algorithms can automate audit monitoring classifications based on historical data to learn criteria and apply similar rules to automate tasks (6).

Understanding natural language allows for data review and the automatic creation of questionnaires to be sent to supervised entities if significant gaps appear.

For instance, if the system identifies a significant increase in general expenses for taxpayers' wages, sales, and distribution expenses compared to the previous year, it can automatically pose questions related to the reasons and evidence for such conditions.

Similarly, if an entity does not comply with purchasing rules over the year, natural language processing can raise questions and request clarification from the audited entities.

2. **Use of AI Expert Systems in Auditing:** Expert systems in auditing can be defined by summarizing the most important among them as follows (7):

Computer programs containing knowledge and expertise acquired from one or more audit experts are designed to emulate the thinking methods and decision-making rules of an expert auditor in a specific field to solve new and uncommon problems.

Expert systems in auditing are also known as applications that combine human expertise in accounting and auditing, simulating human thinking in problem-solving and decision-making to

assist accountants and auditors in improving the quality of the audit process in areas such as planning, evaluating internal control systems, and identifying audit risks.

We conclude that expert systems in auditing are artificial intelligence applications designed based on three fundamental pillars: a database that stores facts and experiences collected from expert accountants and auditors, a rule base that contains the principles, standards, and procedures governing the accounting and auditing profession, and an inference engine, known as the pulsating heart through which various problems are solved, and decisions are made by simulating the way the human mind thinks (8).

**3. The Importance of Using Big Data Analysis in Auditing:** Big data analytics is one of the technologies most used by most auditing firms as it is a fundamental and useful element in the strategy to improve audit quality. Analytical tools help the auditor in audit sampling, better identifying errors and fraud, assessing operational business risks, and adapting auditors' approaches to deliver more relevant auditing. Here are some of the uses of big data analytics in the auditing profession:

- **Improving inventory audits:** The vast size of some inventory lists uses data analysis in inventory audit processes like identifying inventory shortages, obsolete inventory, slow-moving inventory, reconciling inventory with the general ledger, conducting samplings and assessments, testing inventory data, and better understanding long-term and short-term inventory risks (9).
- **Expanding the scope of analytics:** Big data is expected to expand the scope of analytics from sample-based testing to the availability of a range of relevant data from structured and unstructured sources over a continuous and fixed time frame, unlike traditional auditing which involves analyzing samples of data taken from a specific period (10).
- **Improving audit quality:** Big data provides a variety of financial and non-financial data whether produced internally or externally, which are considered sources of complementary audit evidence in real-time. For example, if the financial and non-financial data of the organization are entered into the auditing program, relevant and significant information such as financial information and operating data from other enterprises in the same industry can be collected through a data-sharing platform, increasing auditors' understanding and improving audit quality (11).
- **Identifying trends, outliers, and missing data:** Big data analytics are used to identify trends, account movements, activity levels, types of entries, and the employees who post them, allowing management to discover and reduce the number of errors and risks associated with journal entries. For example, if a construction project is completed by 25% but invoiced by 60%, this can be easily detected. Analytics also help in finding missing data, which is often an indicator of an error (12).

- **Improving testing using big data analysis:** Modern technology allows auditors to analyze vast amounts of an organization's financial data and test 100% of its transactions instead of just a sample. Advanced tools enable auditors to perform advanced analyses to gain deeper insights into an organization's operations, and data analytics also allow auditors to track and analyze their clients' trends and risks better against industry or geographic data sets, leading to better assessments throughout the audit process, saving auditors more time to examine complex and high-risk areas, and providing them with a higher level of assurance through continuous monitoring of their ability to access client data in a timely manner (13).
- **Changes in Staffing:** In the future, increased automation and the use of artificial intelligence might lead companies to employ fewer junior auditors who previously performed manual tasks. Some companies fear this could result in a shortage of skilled auditors, thereby increasing salaries to attract highly experienced employees (15).
- **Competition Between Accounting and Auditing Firms and Technology Companies:** Accounting firms may find themselves competing with technology companies like Apple, Facebook, and Google to attract employees to design algorithms.

**4. The Role of Artificial Intelligence in Enhancing Audit Quality:** What can artificial intelligence add to the auditing profession? Using artificial intelligence technologies can help reduce audit risks associated with expressing an incorrect opinion, or in other words, failing to detect material errors in the internal control system or in financial statements due to relying on a limited sample of the statistical population.

Here, the importance of artificial intelligence technologies emerges due to their ability to scrutinize the entire statistical population, regardless of its size. Consequently, it enables the auditor to identify unusual or suspicious operations that are difficult to detect when only using a sample.

Increasing efficiency is also seen as one of the most significant benefits of using artificial intelligence in auditing. It qualifies the auditor to achieve higher levels of assurance with less time and effort spent (16). Instead of spending long hours reviewing contracts, the machine completes this task in record time, which helps the auditor save time and devote more attention to more critical aspects that cannot be achieved using machines, such as interacting with clients, building strong relationships with them, and better understanding their needs.

### **Secondly: The Future and Challenges of Using Artificial Intelligence in Auditing**

1. **The Future of the Auditing Profession in the Age of Artificial Intelligence** With increasing pressure on internal auditors to enhance the value they bring to their organizations, some wonder whether artificial intelligence could help achieve this goal. AI, which leverages algorithms to identify and understand patterns and anomalies within data sets, can more efficiently assist internal auditors in identifying risk areas and swiftly executing many other tasks. Despite expectations, the adoption of AI is still relatively

uncommon among internal auditing functions. A study found that only 16 percent of companies today derive significant value from AI, but this number is expected to more than triple within two years, according to the study. AI solutions can look at both internal and external information of an organization and thus help the organization identify emerging risks and threats not yet considered (17).

AI can also provide internal auditors with actionable insights to mitigate risks. For instance, in retail settings, AI might reveal increases in thefts of items like razor blades and batteries, enabling regional managers to take action, such as directing store employees to move these products behind the counter. Another benefit of AI is its ability to simplify operations. For example, many institutions require management approval for invoices exceeding a certain amount to control spending. To further enhance control, the finance department may also review a portion of the transactions. AI solutions can review these transactions as they occur and report those that violate pre-set rules. Given the promises of AI, why haven't more organizations implemented it? There are several factors. As with any initiative, AI projects must compete for corporate support and budgets against other worthy competitors. Remote work during the pandemic also contributed to delaying many programs from implementing AI in internal auditing.

2. **Challenges of Using Artificial Intelligence in Auditing** As the field of AI innovates and evolves over time with technological advancements, auditors will continue to face challenges in using AI in their work. Some current examples of obstacles include: (18)

- Designing AI programs for auditing purposes can be challenging due to complex data environments. Auditors collect and utilize a variety of data and evidence types, and integrating different forms of data into one AI model can be difficult. In addition, auditing programs need to balance how AI is integrated while maintaining the roles of human auditors.
- Ensuring that audit staff are qualified to employ AI methodologies relevantly and capable of keeping up with technological advancements in the auditing field. Auditors also need to understand and explain the rationale behind audit findings. Ensuring the transparency and interpretability of results generated by AI is crucial but can be difficult to achieve.
- Securing cybersecurity for high-quality data and information for the entities under supervision as well as for the supreme audit institutions. AI models rely heavily on high-quality, consistent data to make accurate decisions. Ensuring data integrity poses a challenge, as inaccuracies in input data can lead to flawed audit results.

### **Thirdly: Artificial Intelligence at the Global Auditing Firm EY**

#### **1. About EY:**

EY is a global leader in financial auditing, tax advisory, business transactions, and consulting services. The services we provide help increase confidence in financial markets and contribute to

building economies worldwide. Our employees around the globe are united through our shared values and our unwavering commitment to quality, aiming to make a difference for the better by helping our staff, clients, and communities achieve sustainable growth, innovation, and excellence. We strive to build a better world through our work, knowledge, and expertise. EY refers to the global organization or one of its member firms of Ernst & Young Global Limited, each of which is a separate legal entity. Ernst & Young Global Limited, a UK company limited by guarantee, does not provide services to clients. Information about how EY collects and uses personal data and the rights individuals have under data protection law can be found at [ey.com/privacy](https://ey.com/privacy). For more information about our organization, please visit [ey.com](https://ey.com). (19)

## 2. EY's Success in Using Artificial Intelligence to Detect Fraud in Auditing:

When EY, one of the Big Four accounting firms, earlier this year trialed an artificial intelligence system trained to detect fraud in the accounts of some of its audit clients in the UK, the results were stunning (20).

According to Cathy Barrow, EY's managing partner for assurance in the UK and Ireland, the new system identified suspicious activity in two of the first ten companies it checked. The clients later confirmed that both cases were indeed fraud.

This early success illustrates why some in the industry believe artificial intelligence has significant potential to enhance audit quality and reduce workloads. They hope that AI systems' ability to absorb and analyze vast amounts of data will provide a powerful new tool for auditors to detect signs of non-compliance and other issues.

However, auditors sharply disagree on how much they can rely on technology that has not yet been widely tested and is often poorly understood.

Some audit firms doubt whether AI systems can be fed enough high-quality information to reliably detect the various and diverse potential forms of fraud. There are also some concerns about data privacy if auditors use client's confidential information to develop AI.

These questions mean there are clear differences in approach among the UK's major audit firms. While EY has declined to disclose details of its program or the nature of the frauds it detected, Barrow said the results suggest the technology has "legs" for auditing.

She said, "It appears this is something we need to develop or explore further."

Nevertheless, Simon Stevens, head of AI in audit and assurance at Deloitte UK, another of the Big Four, pointed out that fraud is relatively rare and tends to vary from one case to another. He said, "Frauds... are unique and each is committed in a slightly different way. By nature, they are designed to circumvent safeguards through new uses of technology or by exploiting new vulnerabilities, and AI does not play well there at the moment."



The regulatory bodies are likely to have the final say on how this technology is deployed. Jason Bradley, head of assurance technology at the UK Financial Reporting Council, which oversees auditing, said AI offers opportunities "to support improvements in the quality and efficiency of audits" if used properly.

But he cautioned that companies will need expertise to ensure the systems work according to the right standards. He said, "As the use of AI grows, auditors must have the necessary skills to critique AI systems, ensure the accuracy of the outputs, and have the ability to deploy the tools in a manner that is consistent with standards."

While traditional audit programs must be told the data patterns that indicate fraud or other issues, AI systems are trained to detect problems using machine learning and data from many known cases of misconduct. Over time, they should get better at doing so as they gain experience.

The technology could be particularly useful if it reduces the workload of reviewers. Companies around the world struggle to train and employ staff. It could also help raise standards: In recent years, auditors have overlooked serious financial problems that led to the collapse of companies, including outsourcing firm Carillion, retailer BHS, and Patisserie Valerie café chain.

EY's experience, according to Barrow, used a machine learning tool trained on "lots and lots of fraud schemes," drawn from publicly available information and past cases the company was involved in. While current programs widely used search for suspicious transactions, EY said its AI-powered system was more sophisticated. It had been trained to look for transactions typically used to cover up fraud, as well as the suspicious transactions themselves. The company said it discovered the fraud schemes among the initial ten trial clients because there were similar patterns in the training data.

Barrow described the AI system, which she referred to as "the copilot for auditors," as saying, "All it does is tell you: This is something you need to explore further." "It focuses our efforts to understand more."

However, other companies doubt that AI systems are smart enough to detect complex frauds. KPMG in the UK, another of the Big Four audit firms, echoed Stevens' concerns at Deloitte.

KPMG said, "Fraud by its nature is unpredictable, and therefore using known fraud cases to train machine learning models is challenging."

Stevens acknowledged that the technology has its uses in auditing. But he saw a very limited role for it. He said, "Artificial intelligence can automate some of the more mundane and repetitive tasks, and allows our auditors to focus on areas more prone to risk."

Deloitte is currently restricting the use of AI in less complex tasks, providing clear instructions on the types of anomalies to look for in company accounts (21).

Stevens said one issue is that the company might consider its detailed financial data private, which would make it difficult to use that private information to train a system that then reviews another company.

He said, "Anyone developing AI needs to be aware of this."

Barrow acknowledged the challenges. She said it is crucial that auditors understand how the AI system's coding works, the real meaning of the results it produces, and the nature of the data used to train it.

"We need to complement it with...," she said. "Applying this auditing lens of skepticism, so we can clarify that it is fit for purpose."

Barrow also recognized the issue related to using a company's private information to train AI systems. But she said there is enough publicly available information to supplement EY's own work and provide useful training for the company's AI systems.

Barrow said, "The technology has already been applied extensively to help us assess and identify risks." "Increasingly, AI will be another tool at our disposal to do that."

### **3. EY's use of artificial intelligence in the auditing profession**

Recently, EY, one of the leading global accounting firms, has applied artificial intelligence (AI) in its auditing processes to detect fraudulent activities. The initial results were promising, as the AI identified suspicious activities in two of the first ten companies assessed. While EY promotes the potential of AI in auditing, the industry remains divided over its reliability for detecting fraud.

### **4. Artificial intelligence in auditing: Detecting fraud at EY**

Ernst & Young (EY), a prominent auditing and accounting firm, has entered the field of artificial intelligence to enhance its auditing processes. By harnessing the power of AI, EY aims to improve the accuracy and efficiency of its auditing procedures (22).

EY began using AI-based auditing in 2018, with the goal of revolutionizing how the company detects fraudulent activities. In the initial phase of this endeavor, EY used AI to assess ten different companies. Notably, the AI system identified suspicious activities in two of these companies, which the clients later confirmed as fraud.

Cathy Barrow, EY's managing partner for assurance in the UK and Ireland, expressed optimism about the effectiveness of the AI system. While specific details about the AI program and the nature of the detected frauds were not disclosed, Barrow's statement suggests that EY sees significant potential in integrating AI into its auditing operations.

- **The Birth of Helix Glad**

A key figure behind EY's success in integrating artificial intelligence into auditing is Naoto Ichihara, Assurance Partner at Ernst & Young ShinNihon LLC in Tokyo. With a background in programming and a passion for developing audit models and systems, Ichihara was inspired to explore the application of machine learning in analyzing accounting data. His extensive research in academic papers and existing algorithms led to a pioneering realization: there was a more effective way to detect anomalies through machine learning. From this insight, Ichihara embarked on a journey to create an AI solution capable of sensing discrepancies within vast databases of financial information.

His innovation became the first of its kind in the auditing field, ultimately leading to a patent for this groundbreaking solution. Named the EY Helix GL Anomaly Detector (Helix GLAD), it represents a milestone in AI-based auditing.

- **Gaining Confidence in Artificial Intelligence**

While AI has the capability to rapidly analyze extensive data sets, the accounting industry remains divided over its reliability in detecting countless potential forms of fraud. To address these doubts, EY's assurance team conducted rigorous testing of Helix GLAD against a dataset containing predefined fraudulent journal entries. As the algorithm consistently and accurately identified these fraudulent entries, auditors began to gain confidence in Helix GLAD's potential to enhance audit accuracy. However, a critical element was still missing: auditors lacked knowledge about why the AI system identified specific anomalies. This understanding was crucial for evaluating the validity and impact of the flagged entries.

- **Bridging the Gap: Data Analytics for Transparency**

Recognizing the need for transparency and understanding in auditing, the EY team developed a solution that leverages data analytics. This solution aims to create visual maps of flagged entries, providing auditors with insights into the underlying reasons for the AI algorithm's detections. These visual representations enabled auditors to comprehensively assess flagged entries, bolstering confidence in the algorithm's detection methods. This shift represents a significant step forward in improving the accuracy and efficiency of audit processes while reducing the risks of overlooking financial discrepancies.

## **5. Benefits and Challenges of AI in Fraud Detection at EY**

Integrating AI into fraud detection processes offers numerous benefits for large accounting firms like EY. AI algorithms have the capacity to analyze massive amounts of data in a fraction of the time it takes a human auditor. This efficiency allows auditors to focus on interpreting results rather than laboriously reviewing data. Moreover, AI models are not susceptible to human biases or fatigue, consistently applying predefined rules and standards to identify anomalies.

This objective and reliable approach minimizes the risks of overlooking suspicious transactions due to human error or oversight, thereby enhancing the effectiveness of fraud detection. However,

implementing AI in fraud detection comes with its challenges. Integrating AI technology into existing auditing systems and workflows is a significant challenge. Accounting firms must ensure that AI algorithms seamlessly integrate with their infrastructure and processes, necessitating meticulous planning, training, and collaboration between auditors and AI specialists.

Another challenge involves the ongoing monitoring and updating of AI algorithms. As fraudsters adapt and develop their techniques, AI algorithms must remain adaptable to detect new patterns and anomalies. Collaboration between auditors and developers is crucial for continually improving and updating algorithms to stay ahead of emerging threats.

## **6. The Future of AI in EY's Audit and Regulatory Considerations**

The adoption of AI in audit fraud detection has the potential to enhance the quality and efficiency of audits. However, regulatory bodies will play a pivotal role in determining how much accountants can rely on AI during the audit process. Jason Bradley, head of assurance technology at the UK Financial Reporting Council, acknowledges that AI offers opportunities to improve audit quality and efficiency if used appropriately. Regulatory decisions will likely hinge on accountants' ability to critically assess and critique AI systems.

Moreover, the issue of data ownership poses a challenge. Companies may regard their detailed financial data as proprietary, making it complex to use this private data to train AI systems that audit other entities. EY's successful application of AI in audit fraud detection highlights the potential benefits of AI in auditing. Despite ongoing challenges, the transparency and efficiency provided by AI-based solutions could reshape how auditors detect and address fraudulent activities in the future. The industry, regulators, and auditors must collectively address these opportunities and challenges as AI continues to evolve in audit practices.

## **Conclusion**

To enhance responsible data practices, institutions must also establish strong governance frameworks. These frameworks should define clear policies and procedures for data collection, storage, and usage. Regular auditing and assessment should be conducted to ensure compliance with ethical standards and regulatory requirements. Additionally, accountability measures should be put in place to hold organizations responsible for any misuse or violation of data privacy.

In the era of big data we live in, prioritizing the protection of sensitive information is crucial. Personal data such as health records, financial information, and biometric data must be safeguarded at the highest level of security. Encryption, access controls, and data anonymization techniques should be utilized to mitigate risks of unauthorized access or data breaches. Finally, institutions should invest in robust cybersecurity measures to protect the privacy and integrity of the data they handle.

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