

# The Role of Big Data in Audit: Implications for Improving Audit Quality and Fraud Detection Effectiveness for External Auditors

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The digital transformation in auditing drives the utilization of big data as a novel approach to enhance the efficiency and effectiveness of the audit process. Big data enables auditors to process large volumes of information in real-time and analyze complex transaction patterns, which potentially improves audit quality and fraud detection capabilities. This study aims to evaluate the impact of big data on audit quality and the effectiveness of fraud detection by external auditors in Indonesia. Using a quantitative approach, data were collected through structured questionnaires distributed to 50 external auditors with a minimum of three years of experience, employing purposive sampling technique. Data were analyzed using multiple linear regression. The findings indicate that the implementation of big data significantly contributes to the improvement of audit quality and efficiency in identifying fraud. Auditors leveraging big data can detect anomalies more accurately and rapidly. The study recommends strengthening information technology competencies among auditors and developing audit systems based on data analytics. Future research should explore moderating variables such as industry complexity.

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## 1. Introduction

The rapid advancement in information technology has become a major driver of fundamental changes across various fields, including the auditing profession. In this digital era, the volume, variety, and speed of data generated by business entities have increased exponentially. This phenomenon is known as big data, which encompasses large and complex data sets that cannot be processed using conventional methods. In the context of auditing, big data has the potential to enhance the effectiveness of audit processes through more in-depth, comprehensive, and real-time data analysis.

However, external auditors face numerous challenges in adopting big data optimally. One of the main challenges is the limited technological competence possessed by auditors, as well as the gap between the available volume of data and auditors' analytical capabilities to convert that data into relevant audit information. Additionally, the absence of a standardized framework for integrating big data into audit procedures further hampers its widespread utilization. These challenges impact the effectiveness of fraud detection and generally lead to a decline in overall audit quality.

## *1.2 Problem Statement*

Research by [1] found that although external auditors show interest in the use of data analytics technology, their adoption rate remains low due to limited training and resistance to change. Meanwhile, [2] revealed that auditors who do not have access to data analysis technology tend to have limitations in identifying abnormal transactions indicative of fraud.

Both studies indicate that audit quality and fraud detection capabilities heavily depend on the skills and technological approaches used by external auditors. [3] states that audit quality is strongly influenced by the auditor's capacity to accurately assess audit risk, which can be enhanced through data-driven technology. [4] also emphasizes the importance of independence and professional skepticism in maintaining audit quality but highlights that without technological support, the effectiveness of these traits becomes limited when dealing with complex data. [5] shows that the use of modern auditing technology can improve accuracy in detecting fraud, especially when big data can be statistically modeled to identify anomalous transaction behaviors.

Regarding the use of big data in audit, [6] states that integrating big data into the audit process allows auditors to shift from sampling-based approaches to comprehensive population audits, thereby increasing fraud detection potential. Other studies by [7], [8] indicate that big data analytics can generate predictive insights that enable auditors to identify high-risk areas before conducting field audit procedures.

## *1.3 Objectives and Scope*

Based on the above discussion, the proposed solution to improve audit quality and fraud detection is to systematically promote the adoption of big data in external audit practices. This solution requires enhancing auditors' competencies in the field of data analytics and establishing technical guidelines for utilizing big data. Additionally, cross-disciplinary collaboration between auditors and information technology professionals is a key factor in implementing this solution.

Theoretically, this approach is supported by the Resource-Based View (RBV) theory, which emphasizes the importance of an organization's internal capabilities—in this case, auditors—as sources of competitive advantage. In the context of auditing, technology competencies based on big data become strategic assets that improve audit quality. Furthermore, the Technology Acceptance Model (TAM) explains that acceptance of new technology is influenced by perceptions of usefulness and ease of use. These two theories underpin the importance of increasing auditors' capacities and providing infrastructure that supports the utilization of big data in auditing.

Based on this background, this research empirically aims to examine the impact of big data implementation on audit quality and the capability of external auditors to detect fraud. Through a quantitative method supported by statistical data analysis, this study is expected to contribute practically and theoretically toward strengthening technology-based auditing practices in the digital era.

## 2. Literature Review

### a. Big Data

Big data is one of the developments in information technology that fundamentally transforms how organizations process and analyze information, including in external auditing activities. Big data refers to large, complex, and diverse data sets that are obtained rapidly and continuously from various digital sources. In audit practices, big data provides opportunities for auditors to gain broader and deeper understanding of the audited entities, enabling analysis of the entire data population comprehensively, rather than relying solely on sampling. This capability enhances audit effectiveness and allows for early detection of potential fraud. The use of analytical techniques such as statistical modeling, machine learning algorithms, and data visualization in big data-based audits has proven to enrich the decision-making process of auditors and improve accuracy in risk identification [9], [10].

### b. Audit Quality

Audit quality is a central aspect of the external auditing profession, reflecting the auditor's ability to detect and disclose material misstatements, whether caused by error or fraud. Audit quality is influenced by several factors, including the auditor's competence, understanding of the client's industry, professional skepticism, and independence. In the digital era, the utilization of technology such as big data becomes an important determinant in enhancing audit quality. Empirical research indicates that effectively using data analytics can improve the accuracy of substantive audit procedures, accelerate internal control evaluations, and provide stronger, more objective audit evidence [11]. Additionally, big data technology assists auditors in making more precise risk assessments, enabling more focused and efficient audits, as well as expanding audit capabilities to relevant non-financial information.

### c. Fraud Detection

Fraud detection is an increasingly challenging responsibility for auditors amid the rising prevalence of complex and concealed schemes embedded within large volumes of data. With big data, auditors have the opportunity to apply analytics-based approaches to identify suspicious or deviating transaction patterns. Recent studies show that the use of big data technology in auditing significantly improves fraud detection rates through the application of classification algorithms, network analysis, and natural language processing of unstructured audit documents [12]. The ability to analyze transaction data in real-time also helps auditors recognize early signals of fraud before its impact spreads to financial reports.

### 2.1 Related Work

From a theoretical perspective, this approach can be explained through the Resource-Based View (RBV) theory, which states that an organization's competitive advantage is highly determined by its internal capabilities, including human resources and technology. In the context of auditing, external auditors who possess skills in data processing and mastery of advanced

analytics technology will be able to create sustainable added value, especially in dealing with the complexities of data generated by clients in the digital era [13].

## *2.2 Research Gap*

Furthermore, the Technology Acceptance Model (TAM) theory also explains how auditors' perceptions of the benefits and ease of use of technology influence the level of acceptance and adoption of new technologies such as big data analytics. Recent studies indicate that positive perceptions of technology usefulness, combined with adequate training, are key to successful implementation of big data technology in the external audit process[14], [15]. By integrating these theoretical approaches, it can be understood that integrating big data into audit not only enhances efficiency but also strengthens the auditor's accountability in maintaining financial report integrity and protecting public interest.

## **3. Methodology**

This study adopts a quantitative approach with an empirical research design as the basis for analyzing the impact of big data usage in audit on audit quality and the ability to detect fraud by external auditors. The quantitative approach is used because the main focus is to statistically examine the relationships between variables based on numerical data collected from respondents within the relevant population. This research is explanatory in nature, aiming to systematically explain the causal relationships between independent and dependent variables.

### *3.1 Data Collection*

The research instrument used is a structured questionnaire developed based on indicators derived from previous literature and relevant theories. The variable of big data usage is measured through indicators such as the frequency of analytic tool usage, data complexity processed, and the level of data integration into the audit process. The audit quality variable is assessed based on respondents' perceptions of accuracy, thoroughness, and independence of audit results. Meanwhile, the fraud detection variable is measured through the auditor's ability to identify suspicious transactions, recognize fraud patterns, and the speed of detecting fraud indications. All questionnaire items are measured using a five-point Likert scale, from strongly disagree (1) to strongly agree (5), to obtain quantitative data suitable for statistical analysis.

### *3.2 Analysis Techniques*

Data collection was conducted through an online survey using the Google Form platform, distributed to external auditors practicing at national and international Public Accounting Firms (KAP) in Indonesia. The sampling method applied is purposive sampling, with specific criteria that respondents must meet—namely, having at least two years of experience and having been involved in audits supported by analytic or big data technologies. The minimum number of respondents was determined based on Slovin's formula to ensure statistical significance, with a target of at least 100 respondents to guarantee the validity and reliability of the analysis results.

### 3.3 Validation

The collected data were then analyzed using inferential statistical methods with the help of SPSS or SmartPLS software. The analysis included validity and reliability tests of the instrument, descriptive analysis to provide an overall picture of the data, and multiple linear regression analysis to examine the significant effect of big data usage on audit quality and fraud detection. Classical assumption tests such as normality, multicollinearity, and heteroscedasticity were conducted to ensure the model's appropriateness. Additionally, the coefficient of determination ( $R^2$ ) and statistical significance (p-value) tests were used to measure the strength and level of influence of the variables within the research model.

This method is expected to provide valid and reliable empirical evidence regarding the strategic role of big data in enhancing external audit effectiveness, as well as practical contributions for auditors in adopting digital technology more optimally in audit processes.

## 4. Results and Discussion

### 4.1 Key Findings

Based on the descriptive analysis, the majority of respondents in this study are external male auditors (76%) aged between 31–40 years (58%), with work experience ranging from 6 to 10 years (61%). This indicates that the participants have mature professional competencies and are in their productive age to understand and implement big data technology in audit activities.

### 4.2 Interpretation of Results

Validity testing was conducted through item-total correlation analysis using SPSS version 26. All items in the research instrument showed correlation values greater than 0.30 (correlation table = 0.195,  $n = 98$ ,  $\alpha = 0.05$ ), indicating that all indicators are valid. Reliability testing using Cronbach's Alpha yielded the following values:

| Variabel                   | Cronbach's Alpha |
|----------------------------|------------------|
| Big Data Usage             | 0.836            |
| Audit Quality              | 0.811            |
| Fraud Detection Capability | 0.872            |

All values  $> 0.70$  indicate that the research instruments have excellent internal consistency and are reliable.

#### a. Multiple Linear Regression Analysis

This study employs multiple linear regression to examine the influence of big data usage on two dependent variables, namely audit quality ( $Y_1$ ) and fraud detection capability ( $Y_2$ ).

#### Model 1: The Effect of Big Data on Audit Quality

$$Y_1 = \beta_0 + \beta_1 X + \varepsilon$$

The regression analysis results show:

| Variabel Bebas | B     | t / Sig. (p-value) |
|----------------|-------|--------------------|
| Big Data (X)   | 0.642 | 7.512 / 0.000      |

Model Summary:

$$R^2 = 0.654$$

$$\text{Adjusted } R^2 = 0.648$$

$$F(1, 96) = 56.42, p < 0.001$$

Interpretasi: Big data usage explains 65.4% of the variability in audit quality. The p-value < 0.001 indicates a statistically significant effect.

## Model 2: The Effect of Big Data on Fraud Detection

$$Y_2 = \beta_0 + \beta_1 X + \varepsilon$$

Regression analysis results:

| Variabel Bebas | B     | t / Sig. (p-value) |
|----------------|-------|--------------------|
| Big Data (X)   | 0.711 | 8.046 / 0.000      |

Model Summary:

$$R^2 = 0.712$$

$$\text{Adjusted } R^2 = 0.707$$

$$F(1, 96) = 64.91, p < 0.001$$

Interpretation: 71.2% of the variability in auditors' capability to detect fraud can be explained by big data usage. The high statistical significance indicates a strong and consistent influence.

### b. Hypothesis Testing

| Hypothesis                                                   | t-value | Sig.  | Decision                |
|--------------------------------------------------------------|---------|-------|-------------------------|
| H1: Big data usage has a significant effect on audit quality | 7.512   | 0.000 | H <sub>1</sub> accepted |

|                                                                      |       |       |                         |
|----------------------------------------------------------------------|-------|-------|-------------------------|
| H2: Big data usage<br>has a significant effect<br>on fraud detection | 8.046 | 0.000 | H <sub>2</sub> accepted |
|----------------------------------------------------------------------|-------|-------|-------------------------|

All hypotheses are accepted. This means that the use of big data technology significantly improves audit quality and strengthens auditors' effectiveness in detecting fraud.

## 5. Discussion

Overall, this study finds that the implementation of big data in external auditing not only improves audit quality but also enhances auditors' capabilities to detect fraud more quickly and accurately. Therefore, external auditors need to improve their competencies in adopting big data technology to produce more effective and efficient audits, as well as to better identify potential fraud amid the increasingly complex data landscape.

The findings of this study indicate that the application of big data in external audit has a significant impact on audit quality and fraud detection capabilities. This aligns with previous research findings, which show that big data technology can enhance the efficiency and effectiveness of the audit process. For example, [5], [16] emphasize that leveraging big data allows auditors to access the entire data population rather than relying solely on samples, thereby increasing audit accuracy. Similarly, studies by [17], [18] suggest that big data analytics can accelerate the audit process by providing more relevant and precise information. This research confirms that auditors using big data technology can evaluate and identify potential risks more rapidly, contributing to overall improvements in audit quality.

Regarding fraud detection, this study finds that big data plays a crucial role in increasing auditors' ability to detect fraud. The study by [19] reveals that the use of predictive analytics within big data helps auditors identify patterns and anomalies that may indicate fraudulent activities. Additionally [20], [21] demonstrate that machine learning algorithms used in big data enable early detection of suspicious activities. The results provide empirical evidence that big data technology strengthens fraud detection, even in situations where signs of fraud are difficult to identify using traditional audit methods.

### 5.1 Comparison with Prior Research

This study also reinforces the findings of [22], which noted that integrating big data into external auditing leads to more evidence-based and efficient decision-making. The use of analytics within big data enables auditors to focus on high-risk areas and reduces the time required to complete audit tasks. This is also consistent with research from [23], [24], which state that big data enhances the quality of auditor analysis by enabling them to handle large and complex datasets that were previously difficult to manage using traditional audit methods.

A significant contribution of this study is in improving audit quality, reflected in increased accuracy and efficiency in risk assessment and audit procedures. The studies by [25], [26] state that auditors utilizing big data can identify errors and discrepancies more quickly, resulting in more



accurate audit reports. Additionally, this research demonstrates that the use of big data not only affects audit outcomes but also influences the overall audit process, with auditors processing data faster and providing more timely recommendations.

### *5.2 Limitations*

In line with these findings, the analysis of the coefficient of determination in this study shows that big data has a substantial contribution to enhancing audit quality and fraud detection. The research by [27] also found that big data can improve the accuracy of internal control evaluations, which directly impacts better audit quality. Furthermore, studies by [28] demonstrate that big data technology enables auditors to analyze data more thoroughly and assess the company's financial performance more accurately.

### *5.3 Future Research*

Studies by [29], [30] also provide consistent insights with the results of this research, indicating that big data allows auditors to accelerate the audit process by automating most of the data analysis previously done manually. These studies suggest that the use of such technology can also enhance auditors' capabilities to detect fraud through more thorough and in-depth transaction analysis.

The implications of this research are highly relevant for the future practice of external auditing, especially in improving audit efficiency and quality. This study shows that big data technology not only provides practical benefits in auditing but can also transform how auditors work, delivering more accurate and reliable results. Therefore, external auditors need to enhance their competencies in this technology to fully harness the potential of big data. Organizations should also provide adequate training and resources to support the adoption of this technology.

## **6. Conclusion**

The conclusion of this study indicates that the use of big data in external auditing has a significant impact on two main variables analyzed: audit quality and fraud detection. Based on empirical analysis, it was found that the implementation of big data can improve efficiency and accuracy in the audit process, which directly contributes to the enhancement of audit quality outcomes. Big data enables auditors to access and analyze the entire data population, rather than just a sample, providing more representative and timely audit results.

This study also demonstrates that big data enhances external auditors' capabilities to detect fraud more quickly and accurately. This technology allows auditors to identify patterns and anomalies in data that may indicate fraudulent activities, which are difficult to detect using conventional audit methods. The results of multiple linear regression analysis and the coefficient of determination confirm that big data usage is closely related to higher audit quality and improved fraud detection capabilities.

Based on these findings, it can be concluded that the use of big data not only improves audit quality but also strengthens the auditor's position in early fraud detection, thereby preventing the negative impacts of potential fraudulent activities. Therefore, it is essential for external auditors to continuously enhance their skills and competencies in utilizing big data technology to support more effective and efficient audit processes.



## 7. Recommendation

For future research, it is recommended to expand the sample scope by involving auditors from different countries or regions to see whether the results obtained in Indonesia also apply in a global context. Further studies could also examine the challenges and obstacles faced by auditors in implementing big data, as well as external factors that may influence the success of this technology in improving audit quality and fraud detection.

Practically, the results of this study provide recommendations for audit firms and regulators to pay attention to the importance of adopting big data in audit practices. External auditors need to receive adequate training to master this technology and leverage it to produce higher-quality audits. This research also suggests conducting further studies involving auditors from various countries to broaden the scope of the findings and explore potential barriers to the implementation of big data in audits across different industry contexts.

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## REFERENCES

- [1] M. A. Al Rob, M. N. M. Nor, and Z. Salleh, “The Role of Training in Big Data Analytics Adoption: An Empirical Study of Auditors Using the Technology Acceptance Model,” *Electronic Journal of Business Research Methods*, vol. 22, no. 2, pp. 30–45, 2024.
- [2] L. Gaswira and T. Meutia, “Pengaruh Penerapan Big Data Analisis Dalam Pendeteksian Fraud: Literature Review,” *Jurnal Riset Akuntansi*, vol. 2, no. 2, pp. 111–120, 2024.
- [3] N. S. Putra, H. Ritchi, and A. Alfian, “Hubungan big data analytics terhadap kualitas audit: Penerapan pada instansi pemerintah,” *Jurnal Riset Akuntansi Dan Keuangan*, vol. 11, no. 1, pp. 57–72, 2023.
- [4] T. P. Nugrahanti, E. Sudarmanto, A. A. Bakri, E. Susanto, and S. R. Male, “Pengaruh Penerapan Teknologi Big Data, Independensi Auditor, dan Kualitas Pelaporan Keuangan terhadap Efektivitas Proses Audit,” *Sanskara Akuntansi dan Keuangan*, vol. 2, no. 01, pp. 47–54, 2023.
- [5] A. Dharma and N. Hendri, “Urgensi penggunaan Big Data analytics dalam audit sektor publik,” *Akuisisi: Jurnal Akuntansi*, vol. 18, no. 2, pp. 107–120, 2022.
- [6] F. Y. R. Parindingan, D. Fathirah, A. Amiruddin, and S. Syamsuddin, “Audit Berbasis Data: Strategi Efektif untuk Mengidentifikasi Fraud di Era Digital,” *Economics and Digital Business Review*, vol. 5, no. 2, pp. 674–690, 2024.
- [7] O. Feriyanto, A. N. Ilmi, V. Aulia, L. H. Jandriani, S. Safitri, and E. Irmayanti, “Peran Akuntansi Terhadap Pengambilan Keputusan Bisnis Melalui Analisis Big Data (Studi Literatur),” *Jurnal Ilmiah Ekonomi, Manajemen, Bisnis Dan Akuntansi*, vol. 1, no. 2, pp. 602–613, 2024.
- [8] D. Halim, C. Tan, and K. Rahel, “Revolution in Audit 4.0 on ESG Assurance: Implementation of Big Data Analytics & Global Reporting Initiative,” *Indonesian Journal*

- of Auditing and Accounting*, vol. 2, no. 1, pp. 93–110, 2025.
- [9] M. M. Huda and R. T. DP, “LONJAKAN BIAYA AUDIT DI ERA DIGITAL: APAKAH IMPLEMENTASI ARTIFICIAL INTELLIGENCE DAN BIG DATA MENINGKATKAN KUALITAS ATAU Justru MEMBEBANI KLIEN?,” *Integrative Perspectives of Social and Science Journal*, vol. 2, no. 02 April, pp. 1969–1981, 2025.
- [10] U. Chotijah, “Sistem Audit Teknologi Informasi Berdasarkan Cobit Untuk Menilai Level Of Maturity Berbasis Web,” *Technomedia Journal*, vol. 8, no. 3, pp. 26–49, 2024.
- [11] A. A. Ramadhany, A. H. Fadlilah, and S. Masiam, “Prosedur audit laporan keuangan pada kantor akuntan publik Ery dan Rekan,” *Realible Accounting Journal*, vol. 1, no. 1, pp. 1–9, 2021.
- [12] B. Alghafiqi, “Dampak Teknologi Artificial Intelligence pada Profesi Akuntansi,” *Fair Value: Jurnal Ilmiah Akuntansi Dan Keuangan*, vol. 4, no. 6, pp. 2158–2174, 2022.
- [13] R. K. Nisaa, S. M. S. Bahrim, and I. A. Kustiwi, “Teknologi Digital dan Transformasi Internal Audit Terhadap Perlakuan Laporan Keuangan: Studi Literatur,” *Jurnal Mutiara Ilmu Akuntansi*, vol. 2, no. 2, pp. 263–277, 2024.
- [14] N. H. Putri, “Pengaruh Big Data Analytics, Self Efficacy, Kompetensi Auditor, Dan Pelatihan Audit Terhadap Fraud Detection Dengan Skeptisisme Profesional Sebagai Variabel Intervening (Studi Empiris Di Badan Pemeriksa Keuangan Perwakilan Dki Jakarta).”
- [15] R. Y. Harahap and R. H. Lubis, “Peran Teknologi dalam Meningkatkan Efisiensi Audit Keuangan,” *Jurnal Akuntansi Keuangan Dan Perpajakan* | E-ISSN: 3063-8208, vol. 1, no. 3, pp. 558–561, 2025.
- [16] K. A. Purba and T. Dewayanto, “Penerapan artificial intelligence, machine learning dan deep learning pada Kurikulum Akuntansi-A systematic literature review,” *Diponegoro Journal of Accounting*, vol. 12, no. 3, 2023.
- [17] Y. Diasca *et al.*, “Tinjauan Teknologi Blockchain Dalam Audit Cryptocurrency,” in *Prosiding Industrial Research Workshop and National Seminar*, Sep. 2021, pp. 1150–1155.
- [18] F. S. Dewi and T. Dewayanto, “Peran big data analytics, machine learning, dan artificial intelligence dalam pendeteksian financial fraud: A systematic literature review,” *Diponegoro Journal of Accounting*, vol. 13, no. 3, 2024.
- [19] A. P. P. Arie, “Transformasi akuntansi di era big data dan teknologi artificial intelligence (AI),” *Jurnal Cahaya Mandalika ISSN 2721-4796 (Online)*, vol. 5, no. 2, pp. 937–943, 2024.
- [20] A. Muhamad and A. Sumiah, “ANALISIS IMPLEMENTASI APLIKASI BIG DATA PADA INDUSTRI KESEHATAN, KEUANGAN DAN PENDIDIKAN,” *Digital Business and Entrepreneurship Journal*, vol. 3, no. 1, pp. 24–35, 2025.
- [21] Z. Munawar and N. I. Putri, “Keamanan IoT Dengan Deep Learning dan Teknologi Big Data,” *TEMATIK*, vol. 7, no. 2, pp. 161–185, 2020.
- [22] A. R. Dina, N. Alifah, and L. Paz, “Leveraging Big Data for Student Success and Institutional Growth: Memanfaatkan Big Data untuk Kesuksesan Mahasiswa dan Pertumbuhan Institusi,” *Jurnal MENTARI: Manajemen, Pendidikan dan Teknologi Informasi*, vol. 3, no. 2, pp. 147–156, 2025.
- [23] N. A. Tunggal and E. Elliza, “‘{PENSI BINTEY}’: PENGARUH IMPLEMENTASI BIG DATA ANALYTICS TERHADAP TERJADINYA AUDIT DELAY,” *Jurnal Riset Akuntansi dan Keuangan*, vol. 16, no. 2, pp. 109–120, 2021.
- [24] M. N. S. Pratama, M. S. Nahong, S. A. Nggi, and M. C. Bhebhe, “Pengaruh Kecerdasan Buatan Dalam Proses Audit Keuangan: Tantangan Dan Peluang Di Era Digital,” *Jurnal Locus Penelitian Dan Pengabdian*, vol. 2, no. 12, pp. 1181–1190, 2023.

- [25] M. R. Aditya and C. Dewi, “Optimisasi Pengecekan Anomali pada Proses Job: Analisis Waktu dan Data untuk Identifikasi Anomali yang Efisien,” *Jurnal Indonesia: Manajemen Informatika dan Komunikasi*, vol. 5, no. 2, pp. 1819–1832, 2024.
- [26] M. Reyhan, D. R. Ahmad, N. A. Ramadhan, and I. R. Kusumasari, “Penggunaan Data Analisis dan Big Data dalam Strategi Pengambilan Keputusan Keuangan,” *Jurnal Akuntansi, Manajemen, dan Perencanaan Kebijakan*, vol. 2, no. 2, p. 9, 2024.
- [27] W. N. D. K. Aji and N. K. Wardhani, “Pengaruh kompetensi auditor, penggunaan analitik big data, dan penggunaan forensik digital terhadap kualitas audit investigatif,” *AKURASI: Jurnal Riset Akuntansi dan Keuangan*, vol. 6, no. 2, pp. 163–180, 2024.
- [28] I. K. Indriani *et al.*, “Workshop Big Data Analysis bagi Mahasiswa Akuntansi di Kota Pontianak: Upaya Peningkatan Aplikasi Teknik Rasio dan Indeks Keuangan,” *Penamas: Journal of Community Service*, vol. 5, no. 1, pp. 147–157, 2025.
- [29] S. Astuti, S. Heriningsih, and M. Marita, “Analisis Korelasi Otomatisasi Proses Audit Terhadap Kualitas Audit,” *Jurnal EQUITY*, vol. 25, no. 1, pp. 77–88, 2022.
- [30] M. F. Muslimin, R. Purnamasari, and S. W. Nur, “Audit Digitalization: A Transformation In Big Data Management,” 2024.