# EXPLORING THE BENEFITS OF ARTIFICIAL INTELLIGENCE (AI) FOR ACCOUNTING: CASE STUDY USING OF SIMPLE ML (MACHINE LEARNING) FOR SHEET PROCESS

**[1]Shabrina Zati Bayani**,**[2]Budi Wasito**

*[1] Accounting study program, Institut Bisnis dan Informatika Kwik Kian Gie, Jakarta, Indonesia*
*[2] Information study program, Institut Bisnis dan Informatika Kwik Kian Gie, Jakarta, Indonesia*

*Author's email:*
*[1]36210174@student.kwikkiangie.ac.id; [2]budi.wasito@kwikkiangie.ac.id*

*Corresponding author: budiwasito17@gmail.com*

**Abstract.** *Traditional financial procedures are being revolutionized by the integration of artificial intelligence (AI) and machine learning (ML) in accounting, which offers improved efficiency, accuracy, and decision-making skills. This article uses a case study using Simple ML for Sheet processing to investigate the advantages of AI in accounting. This paper offers a comprehensive overview of the effects of AI on accounting processes with a trial use of one of the AI tools, namely Simple ML for Sheets. The results show that by automating repetitive operations like data matching, anomaly detection, and trend forecasting, AI greatly increases the efficiency of data processing. Simple machine learning models have been used in sheet operations, showing a significant decrease in human error and producing more valid and trustworthy financial reporting. Furthermore, by evaluating real-time data and offering actionable insights, AI helps decision-makers make decisions more quickly and intelligently. Notwithstanding these benefits, the study also points out a number of practical obstacles, such as the requirement for in-depth training, a substantial upfront cost, and worries about data security and privacy. Enhancing professional development, making investments in AI infrastructure, making sure that data security protocols are strong, and encouraging interdisciplinary collaboration are some suggestions for optimizing the advantages of AI in accounting.*

**Keywords**: *Accounting, Artificial Intelligence (AI), Collaboration, Machine Learning (ML), Simple ML for Sheets*

## 1. INTRODUCTION

Artificial intelligence (AI) has the potential to significantly increase accounting's efficiency, ac curacy, and analytical capacity. Accounting professionals may devote more time to strategic analysis and decision-making by using AI to automate repetitive processes like financial reporting and transaction recording. Without requiring any technical knowledge, users can easily deploy machine learning techniques directly on their data using Simple ML for Sheets, an AI based application connected with Google Sheets. The purpose of this study is to investigate the possible advantages of integrating AI into accounting procedures using a use case analysis of Simple ML for Sheets.

Artificial Intelligence (AI) can assist in identifying patterns and anomalies that may not be visible through manual analysis because of its capacity to process vast amounts of data effectively. With the help of Simple ML for Sheets, accountants can create predictive models to identify possible hazards and predict future financial patterns. Using this technology enhances data analysis speed and accuracy while offering deeper insights to help make wiser business decisions. Consequently, businesses can gain a major competitive edge by integrating AI into accounting.

This study will assess the advantages of utilizing this technology and look into how Simple ML for Sheets may be included into the accounting process. This study will give a thorough overview of how AI might enhance accounting quality and efficiency through

case studies and literature analysis. It is anticipated that the research's findings would highlight potential integration process obstacles and offer insightful advice to accounting experts and businesses thinking about implementing AI technology.

## 2. LITERATURE REVIEW

### *2.1 AI Trend in Accounting*

Artificial Intelligence (AI) is transforming the accounting profession by automating repetitive tasks, enhancing accuracy, and improving efficiency (Sudhamathi, 2022). AI applications in accounting focus on three main areas: invisible accounting, continuous auditing, and data-driven decision-making (Sudhamathi, 2022). The most commonly used AI technologies in accounting include genetic algorithms, fuzzy systems, neural networks, and hybrid systems (Zemánková, 2019). Major accounting firms are investing heavily in AI tools for audit planning, benchmarking, and document analysis (Zemánková, 2019). AI implementation in accounting contributes to several Sustainable Development Goals, including economic growth, innovation, and institutional strength (Peng et al., 2023). However, the integration of AI in accounting also presents challenges for professionals, businesses, and regulators (R, 2024). As AI continues to reshape financial reporting and auditing, it offers opportunities for improved efficiency and decision support in the accounting field (R, 2024; Peng et al., 2023).

### *2.2 AI's Role in Accounting*

By improving productivity, accuracy, and decision-making skills, artificial intelligence (AI) is revolutionizing the accounting industry (Peng et al., 2023; Ul-Huq, 2014; Sudhamathi, 2022; Odonkor et al., 2024). Among the uses of AI in accounting are the automation of monotonous operations, the facilitation of ongoing audits, and the provision of useful information for improved decision-making (Sudhamathi, 2022). By reorganizing financial operations and providing companies with real-time data analysis capabilities, the integration of AI helps achieve sustainable development goals (Peng et al., 2023). Financial reporting, auditing, and tax preparation are only a few of the accounting domains where AI has an impact (Ul-Huq, 2014; Odonkor et al., 2024).

Even while AI has many advantages, there are drawbacks as well, like the requirement for trained staff, worries about data privacy, and expensive implementation costs (Odonkor et al., 2024). Notwithstanding these obstacles, AI has the unquestionable ability to completely transform accounting procedures; therefore, a balanced integration strategy that prioritizes ongoing learning, flexibility, and strategic planning is required (Odonkor et al., 2024).

Furthermore, a Mordor Intelligence report projects that until 2027, the use of artificial intelligence in accounting would increase by 30% annually. Also, according to research by Gartner, 80% of CFOs anticipate increasing their AI spending over the next two years. AI solutions for accounting are designed to increase productivity overall, reduce the possibility of human error, and raise efficiency. More precisely, AI is being used by contemporary accounting organizations for: Forecasting, Scheduling, Managing cash flow, Workflow automation, Composing emails and inbox management, Invoice processing and expense management, Data analysis, Business communication and Project management.

A rapidly expanding area of study in recent years has been the integration of artificial intelligence (AI) with accounting. AI has the potential to significantly alter the accounting industry, from the automation of repetitive processes to the provision of insightful strategic information, as demonstrated by numerous studies. In order to decrease human error and increase operational efficiency, Kokina and Davenport's (2017) research, for instance, shows how AI can be used to automate tedious and repetitive accounting tasks like financial reporting and account reconciliation.

Furthermore, AI has demonstrated efficacy in identifying irregularities and thwarting fraudulent activities. For instance, AI was utilized in a study by Brown, Loo, and Zhan

(2019) to find unusual and suspicious transaction patterns that are frequently missed by conventional techniques. According to this study, artificial intelligence (AI) can help accountants and auditors see possible fraud early, allowing for quicker and more efficient preventive action.

*2.3 Will AI replace Accountant?*

Research suggests that rather than replacing the accounting profession, AI will change it, which will have a huge impact on the field (Boritz & Stratopoulos, 2023). The use of AI in accounting organizations is enhancing productivity, progressively raising the proportion of AI employees, and reducing the need for junior accountants (Boritz & Stratopoulos, 2023). jobs and duties are changing as a result of AI's incorporation into accounting; some essential jobs are now handled by AI-based technology, while others call for cooperation between humans and AI (Leitner-Hanetseder et al., 2021). In order to collaborate with AI solutions, accountants must adapt to this change and pick up new abilities (Stancu & Duțescu, 2021). Big 4 accounting companies have already begun using AI as a result of cognitive technologies, which are transforming auditing procedures (Kokina & Davenport, 2017). The truth is that artificial intelligence (AI) offers a chance to lead businesses and financial professionals into a new era of accuracy, efficiency, and strategic prowess. AI won't take the role of accountants.

## 3. RESEARCH METHODS

This study investigates the advantages of utilizing artificial intelligence (AI) in accounting through the use of an exploratory research approach. The exploratory approach was selected because there are still a lot of unanswered questions about the possible advantages of artificial intelligence (AI) in accounting. This research intends to explore fresh perspectives and expand on our knowledge of the ways in which AI might improve accounting procedures.

The following techniques were used to get the data for this investigation. Review of the Literature, with reference to the use and advantages of artificial intelligence (AI) in accounting, the author gathered secondary data from books, industry reports, scientific journals, and other pertinent publications. The purpose of this literature review is to set the theoretical framework and background for this investigation. Additionally, the author examined Simple ML for Sheets, one of the AI technologies that may be utilized in accounting.

## 4. RESULT AND DISCUSSION

Simple ML for Sheets is an add-on for Google Sheets developed by the TensorFlow Decision Forests team. With the help of the Google Sheets add-on Simple ML for Sheets, users may apply machine learning methods to their data without having to write any code. By projecting financial data, identifying abnormalities, and automating repetitive operations, this application can be very helpful in accounting.

. In addition to the obvious advantages, integrating AI into accounting has drawbacks of its own. Sutton, Holt, and Arnold's (2018) research outlined several of the major obstacles to the adoption of AI in accounting, such as staff retraining requirements, resistance to change, and concerns about data protection. But the study also shown that these obstacles may be removed and the full potential of AI can be achieved with the appropriate strategy and training. Because of this, it's critical that businesses weigh the advantages and difficulties of incorporating AI into their accounting procedures.

The body of research indicates that the incorporation of AI, especially with tools like Simple ML for Sheets, holds significant promise for revolutionizing the accounting industry. AI has many benefits that can help businesses increase the accuracy and efficiency of their operations, from automating repetitive processes to enhancing analytical capabilities. But in order to fully reap these rewards, businesses must get

over implementation roadblocks and make sure that their workforce is prepared to use this new technology.

*4.1 Key Features*

With the help of Simple ML for Sheets, accounting professionals may take use of machine learning capabilities without needing to know a lot of ML or code. The following are some of the main functions and accounting uses for Simple ML for Sheets:

a. Identifying Missing Values: Using non-missing values as training data, simple machine learning can identify missing values in a dataset. When data is missing or incomplete, this is especially helpful in accounting since it can help fill in the blanks and increase data accuracy.
b. Finding anomalous Values: By training several models to predict current values and contrasting the predictions with the actual values, simple machine learning (ML) can find anomalous values in a dataset. This makes it easier for accountants to find and fix irregularities in financial data.
c. Forecasting: By training a model on historical data to detect cyclical patterns and trends, simple machine learning can estimate future values. This might be helpful in accounting to forecast sales or revenue and other financial performance in the future.

*4.2 Applications in Accounting*

With the help of Simple ML for Sheets, accounting professionals may take use of machine learning capabilities without needing to know a lot of ML or code. The following are some of the main functions and accounting uses for Simple ML for Sheets:

a. Financial Forecasting: By training models on past data, accountants can apply simple machine learning (ML) to forecast future financial performance. Making plans, budgets, and decisions can all benefit from this.
b. Anomaly Detection: Unusual transactions or anomalies in financial data can be found with the aid of simple machine learning (ML), which is useful for spotting fraud and preserving financial integrity.
c. Data Quality Improvement: Simple ML can assist in enhancing the quality of financial data, guaranteeing more accurate and trustworthy financial reporting, by predicting missing values and recognizing aberrant values.

## CONCLUSION

This study examined the advantages of using artificial intelligence (AI) in accounting by processing worksheets using a straightforward Simple ML for Sheets use case study. The following major conclusions can be summed up based on the outcomes of the data analysis from literature review:

a. Increased Efficiency: It has been demonstrated that using AI and ML in accounting increases data processing efficiency. Simple machine learning techniques applied to spreadsheets can automate repetitive operations like financial trend prediction, anomaly identification, and data matching. This frees up accountants' time and resources for more strategic and high-value work.
b. More Accurate Data AI and ML can help in accounting data processing by reducing human error. The legitimacy and dependability of financial reports are boosted by machine learning algorithms' high degree of accuracy when processing massive amounts of data. The application of basic machine learning on worksheets in this case study demonstrates that the data produced is more reliable and error-free compared to what is frequently produced by hand processing.
c. Challenges in Implementation. Even while there are many advantages, the study also pointed out certain difficulties in using AI and ML to accounting.These include the

requirement for extensive training and comprehension of the technology, a substantial upfront cost for the creation and application of AI systems, and worries about privacy and data security.

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