

# The Role of Artificial Intelligence in Transforming the Accounting Profession: Challenges and Opportunities for professional accountants in Bangladesh

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## ABSTRACT

The study examines the role of artificial intelligence (AI) is transforming the accounting profession in this dynamic world of business and accounting. The focus is on the challenges and opportunities for professional accountants in Bangladesh. The purpose is to understand how AI is reshaping skills, jobs, and ethics in this emerging economy like Bangladesh. The study used a qualitative research design. Data was collected through a single Focus Group Discussion (FGD). Seven experts participated. They represented accounting, IT, human resources, and corporate world. Thematic analysis revealed that AI drives efficiency but also causes acute job displacement fear of job loss among staff. This is a novel finding for the Bangladeshi context. Secondly, there is a prevalent skill and education gap in Bangladesh. This is a retraining crisis for senior professionals. The study suggests that the speed of automation is highly disruptive in emerging markets. Policy recommendations include mandatory AI literacy training, assessing current level of AI adoption and find out the ways to implement AI in major sectors to gain efficiency and effectiveness. To get maximum benefit from this a complete regulatory reforms is necessary.

**Keywords:** Artificial intelligence, machine learning, deep learning, accounting profession.

## INTRODUCTION

The widespread advancement of technology along with artificial intelligence (AI) has brought a huge economic transformation in the world of business and finance (Brynjolfsson & McAfee, 2014). AI is able to perform huge amount of work within a blink of eyes. Complex and repetitive tasks are done within a very short period of time. This allows experts and professional accountant to concentrate on high value creating jobs. This is fundamentally reshaping industries across the globe, and the accounting profession is no exception. Previously the accounting was characterized as routine and repetitive job. But due to advancement of AI, these repetitive tasks are done well by AI applications (Alruwaili & Mgammal 2025). So the accounting profession is at historic moment. AI is not just a trend. It is a powerful technology that is reshaping how financial tasks are done (Greenman, 2024). AI is able to automate routine tasks, enhance financial analysis, improved auditing processes, and advance financial reporting (Jejenywa, Mhlongo, & Jejenywa 2024). This shift lets accountants focus on higher-level analysis and strategy. The profession is moving from data processing to value creation.

This global transformation is also reaching developing nations. Bangladesh is a prime example. The country is seeing rapid economic growth. It has invested huge for digitalization process (Hossain & Mahmud, 2025). The professional accountant of any country plays a very important role in the development of any country. There are two types of functions provided by them. Professional accountants are in an organization works relentlessly for the financial management and preparation of financial statement of that entity. On the other hand, a group of professional accountant ensures truth and fairness of the financial statements. The accounting profession in Bangladesh must now adapt to AI. This presents a critical moment for local firms and professionals (O'Leary & O'Keefe 1997).

However, adopting AI in Bangladesh is complex. Implementing AI systems typically requires substantial fixed costs, including investments in infrastructure, software, and skilled personnel. The AI infrastructure is usually cutting edge, so it is inevitably costly. There is also need to invest in the training the employee to be able to run the AI applications. Many firms struggle with the high initial cost of AI implementation (Stancu & Duțescu 2021). There is also a lack of local expertise and training. Concerns about data security and a weak digital infrastructure also slow down adoption (Joshi et.al. 2002) of AI in most of the local firms.

Despite these difficulties, the opportunities are significant. AI can greatly improve financial transparency. It can also boost the accuracy of financial reporting (MDPI, 2025). AI offers new tools for fraud detection and risk management. This is vital for a growing economy. The rise of AI also demands new skills. Accountants must now learn new skills, like data analysis and financial modeling, to cope with the changing scenario (Zhang, Xiong, Xie, Fan, & Gu 2020). This will create a more strategic and valuable workforce.

This paper explores the impact of AI on the accounting profession in Bangladesh. The article is intended to address several research questions.

Research question 1: what are the probable application of AI in the field of Accounting?

Research question 2: what are the challenges of implementing AI in accounting?

Research question 3: How these challenges can be mitigated?

## LITERATURE REVIEW

Artificial intelligence (AI) is the human-like intelligence exhibited by machines, such as computers or robots (IBM 2022). It encompasses a machine's ability to perform all the activities that human can do. Its capabilities including decision-making, problem-solving, and language processing. AI can collect data process those and take decision of their own. Though natural language processing seems to be the function of most AI, it does much more than that. Artificial intelligence (AI) can perceive, synthesize, and take decision based on the information (Pritchard 2023).

Haenlein & Kaplan (2019) traced back the root of AI with early concepts of machines and logic, gaining formal recognition in 1956. Alan Turing's foundational work paved the way for advancements. Progress continued with machine learning and neural networks, highlighted by milestones like IBM's Deep Blue and Google's AlphaGo. Researchers and experts identified seven stages of AI evolution. The early stage of AI is defined as rule based AI that perform some pre-defined if-then type of task. Then came machine learning which could do some sort of predictive tasks. Whereas the deep learning is more advanced form of machine learning. AI revolution was done by generative AI where AI can create completely new contents like texts, images a videos.

However the most advanced form of AI are agentic AI, Artificial general intelligence and Artificial Superintelligence (ASI).

Jejenywa et al. (2024) explain that AI improves efficiency in accounting by reducing errors and speeding up processes. Machine learning helps with pattern recognition, forecasting, and fraud detection. On the other hand, Natural Language Processing (NLP) supports financial reporting by reading and summarizing large documents. These tools help organizations work faster and make better decisions.

Greenman et al. (2024) also noted that AI changes the roles and responsibilities of accountants. Routine work is decreasing. They need to think out of the box to deal with the changing world scenario. Accountants now need skills in analytics, technology, and interpretation of AI-generated insights. The profession is becoming more strategic and advisory in nature (Altawalbeh et. At. 2025). The early stage of the AI was, focused on expert systems (O'Leary & O'Keefe 1997). These systems supported auditing and taxation by storing expert knowledge. Although early AI was limited, it showed the way to move forward to the current state of AI development. Greenman (2017) shows that large firms like KPMG use tools such as IBM Watson to strengthen audits. AI reviews large volume of documents and is able to identify risks quickly. This reduces human workload

and improves audit quality. Similar trends are found in Stancheva-Todorova (2018), who highlights that AI supports fraud detection, forecasting, and internal controls.

Other researchers emphasize challenges posed by AI. All sorts of new technologies were blamed to replace human being in addition to ease the work load of human being. Many studies note a strong fear of job loss (Wang 2025). Automation can reduce the demand for clerical and entry-level accounting positions. Accountants need new skills, especially in data analytics, programming, and digital tools. Without upskilling, employees may struggle. Studies by Li and Zheng (2018) and Mohammad et al. (2020) state that job displacement is a major concern in the industry.

Though there were concerns, the literature agrees that AI offers major opportunities. Studies consistently highlight benefits such as greater accuracy, lower costs, faster reporting, and stronger fraud detection. AI also allows real-time auditing and continuous monitoring. Managers can use AI-based insights to make better strategic decisions. Many authors conclude that AI will not replace accountants entirely. Instead, it will change their roles and make them more focused on interpretation, problem-solving, and professional judgment.

Among all these studies, very few were done in Bangladesh to describe the situation of Bangladesh. However, the studies those were conducted in Bangladesh were not addressed the professional accountants like Chartered Accountant and Cost and Management Accountants. So there is a gap to be filled. On the other hand there is a methodological gap, as none of the studies were conducted using focus group. Most of the studies were conducted using a structured or semi-structured questionnaire. Others were done through review of literature.

In summary, the literature shows that AI has both challenges and opportunities for the accounting profession. It automates routine tasks, enhances analysis, and improves audit quality. But it also creates skill gaps, ethical concerns, and fears of job loss. The profession must adapt through training, regulation, and curriculum changes. Overall, AI is reshaping accounting and pushing it toward a more advanced and knowledge-driven future.

## **METHODOLOGY**

This study employed a qualitative research design. This was chosen to explore the complex topic in detail. The data were collected by employing a Focus Group Discussion (FGD). This method is ideal for gathering data where there are samples who have in depth information (Morgan, 1997). The method allows participants to share each other's ideas and brainstorm with the most suitable outcome. Our goal was to capture diverse expert views on AI's role in accounting.

### **Research design and Approach**

This study employs a qualitative, exploratory design to develop an in-depth understanding of how artificial intelligence, a modern and advanced technology is reshaping the accounting profession. As quantitative data on the impact of AI on accounting profession is very limited, a qualitative approach was chosen to find out the real insights from the experienced professionals (Denzin & Lincoln, 2005).

### **Participants and Sampling**

To conduct the current study, purposive sampling was used to select the participants. This ensured inclusion of key stakeholders. It was a group with varied but most relevant professional backgrounds. This variety is important for a balanced and productive discussion. A total of eight experts were invited. Seven of the invited experts attended the session. The final group of seven included four distinct professional categories: two Chartered Accountant, two Cost and Management Accountant, an experienced IT expert, an experienced HR manager and a CFO of manufacturing company. This composition was designed to provide a 360-degree view. The slight non-response (one invited expert did not attend) is a normal part of expert-based research (Liamputtong, 2011). The participant were assured that their opinions would be kept confidential and would be used for academic and research purposes only. This made the participant comfortable to express their opinions.

## Data Collection Procedure

The focus group was conducted online. This allowed for easy participation from busy professionals. The session followed a semi-structured format. This provided a flexible yet focused discussion. The entire discussion lasted for 90 minutes. We obtained prior consent from all participants. The session was then audio-recorded.

A trained moderator led the discussion. The moderator used a pre-defined discussion guide. The guide covered three core themes:

1. Roles of AI: Current and future applications of AI in accounting tasks.
2. Challenges in Bangladesh: Specific hurdles for AI adoption in the local context.
3. Future Opportunities: New business models and skill development needs.

The moderator actively encouraged interaction. The moderator ensured that all participants contributed equally. The use of a semi-structured guide helped maintain focus. It also allowed for the emergence of new, unexpected themes.

## Data Analysis

We transcribed the audio recording. This created a complete text record of the discussion. We used thematic analysis to interpret the data (Braun & Clarke, 2006). This involved a systematic six-phase process:

1. Familiarization: Reading and re-reading the transcripts.
2. Coding: Generating initial codes from the data.
3. Theme Searching: Grouping codes into potential themes.
4. Reviewing Themes: Refining and defining the themes.
5. Defining and Naming Themes: Creating clear theme titles.
6. Report Production: Linking the analysis back to the research questions.

This rigorous process helped us identify key patterns. It allowed us to structure the findings around the main challenges and opportunities.

## RESULTS AND DISCUSSION

The focus group provided very rich and contextualized insights on the transformative roles on AI on accounting profession in Bangladesh. The findings contained the challenges of AI implementation in accounting profession along with the opportunities coming across with the challenges.

challenges posed by AI to accounting profession

**Job Displacement & Workforce Reduction:** The main challenge posed by AI, as per most of the participant, is job displacement and workforce reduction. As AI able to perform a lot of work within a fraction of second, using AI will reduce the need for a portion of employees.

“... From what we see in practice, AI is automating a huge amount of routine work—data entry, reconciliations, invoice matching. This is undeniably an opportunity because it improves efficiency and reduces errors.” (A senior Chartered accountant)

“For sure, AI is able work efficiently and error-freely. Often people blame technology if anything wrong is done by it. We have to remember that it is not the mistake of the technology, but of those uses it”. (An IT expert)

“Let us discuss the ability of the AI. It is not something like automating a hard done work. It is letting machine think for you, analyze the situation for you and take decision for you.” (An academic expert in AI and machine learning)

In all of the previous industrial revolutions, new technologies were invented to perform repetitive and labor-intensive works. The creative jobs were always free from any risk. But AI is able perform repetitive and also creative works. Jobs that require judgement and human decision-making ability are also at stake. AI is not going to eliminate the jobs done by accountants but can transform it. Accounting is not more a boring data entry and tedious calculation. It has turned into decision making that determines the future and prospect of an entity. It is now Most of the expert agree to the fact that accounting profession in Bangladesh is insulated form the risk for the time being. But in the near future the risk is supposed to affect us adversely.

**Skill Gaps & Need for Reskilling:** AI creates skill gaps by automating routine tasks, increasing the demand for advanced AI-specific skills like programming and data analysis, and requiring a new general AI literacy for all workers. The same thing applies for accounting jobs.

“In our country, we are just giving a degree that are not up-to-date and commensurate to the need of the age. Our business degrees are specially lagging behind in terms of integration of technology.”

In most of the universities, business degrees are not updated, modern and skill-based. Though the syllabus is, in most of the cases, very updated, the teaching method is not.

#### Probable opportunities from AI adoption

**Automation of Routine Tasks:** AI can automate repetitive and rule-based tasks such as data entry, voucher checking, invoice processing, and bank reconciliations. As these routine tasks take less time, accountants can focus more on analysis, insight generation, and decision support. This shift helps accountants move from clerical work to more meaningful and value-added activities.

**Enhanced Accuracy, Efficiency & Speed:** AI systems reduce human errors by consistently applying accounting rules. Automated systems can process large volumes of data quickly and accurately. This leads to higher efficiency in tasks such as financial reporting, audit testing, and tax computations. Faster processing also helps organizations respond more quickly to regulatory requirements.

**Improved Fraud Detection & Risk Management:** AI tools are better able to detect fraud, anomalies and unusual transactions. It can scan millions and billions of transactions within a second and can detect errors and frauds.

**Superior Financial Analysis & Forecasting:** experts argued that modern and sophisticated AI tools like deep learning are expected to analyze past data and forecast the future with much accuracy.

**Cost Savings & Improved Productivity:** by automating lions share of work, AI can save huge cost and thereby increase productivity. The IT specialist mentioned that it can save not only the money but also the time which is very valuable.

**Strategic & Advisory Role Enhancement:** cutting edge technologies are able to take even the strategic decision and advise the organization on burning issues.

#### How to overcome challenges

The experts suggested that whether we accept or not the rise of AI is inevitable. So we cannot avoid the rising development of AI. What we can do is try to adapt AI in our workplace. It is the right time to take necessary action to address the challenges posed by artificial intelligence.

Accounting bodies can arrange continuous professional development (CPD) program to enhance the skill and capabilities of members.

Identify skill gaps of our graduates. It can be done in both micro level and macro level. Based on the gap action plan can be formed. Each program of each higher educational institute can do it for their own. And the government of Bangladesh can perform the same for the entire economy.

ICAB and ICMAB are two prominent professional accounting bodies in Bangladesh. They can redesign their syllabus for coping with the changing scenario. They can assess the preparedness of their graduates regarding adoption of AI.

Government can take programs to create awareness among all concerned.

## CONCLUSION

Artificial intelligence is a cutting edge technology that is able to do a lot of work previously done by human being. In the field of accounting and auditing, AI has already gained much strong footing. It is doing a number of jobs from checking voucher to preparing financial statement to checking the authenticity of a transaction. It also is able to check the accuracy and authenticity of any transaction. The AI, now-a-days, is trained to imitate human thinking and to take necessary action based on that but at a very low cost that the human. This is a great opportunity for any large scale business which is able to invest a lot on AI model tailored to its need. By doing that, the company is able to cut the cost, automate the work replace man with machine and become profitable. But the downside is, the large workforce is scare of layoff created by this genius technology. But even if we close the window, the will be sun rise. If we want to avoid the AI, we can't because others will embrace it and advance and we will lag behind. So we need to identify our skill gap develop proper strategy and acquire required skill to deal with all new new development like artificial intelligence.

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