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## Will AI and Automation Replace or Assist Accountants

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NORTHERN ILLINOIS UNIVERSITY

Will AI and Automation Replace or Assist Accountants

A Capstone Submitted to the

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In Partial Fulfillment of the

Requirements of the Baccalaureate Degree

With Honors

Department Of

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By

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## **Abstract**

The increasing role of artificial intelligence (AI) and automation in the field of accounting has raised concerns about the future of the profession. This study sought to explore whether AI and automation will replace or assist accountants, and what skills will be required of accountants in the future where AI and automation play a significant role in the field. To achieve this, the study analyzed job postings for accounting software skill requirements and reviewed relevant literature on the subject.

The findings indicate that automation will replace repetitive and process-driven tasks while assisting accountants in higher-level advisory tasks. This shift in the role of accountants will require them to focus more on emotional intelligence-based tasks, such as building rapport with clients, as well as data analytics and communication skills.

This study's contribution is its visualization of job posting data, which offers a comprehensive view of the skills required by employers in the accounting industry. The data confirms the impact of automation on the field of accounting and the need for accountants to develop new skills to remain relevant in a rapidly changing job market.

In conclusion, the study suggests that automation and AI will not replace accountants but rather change the nature of their work. To remain competitive, accountants will need to focus on developing skills in data analytics, communication, and emotional intelligence to better serve clients' needs. This study's findings have significant implications for the accounting profession and its future, highlighting the importance of adapting to the changing technological landscape to remain competitive in the job market.

## **I. Major Technology Changes in Accounting**

The Accounting profession is being impacted by the changes in technology. Major technological innovations such as Artificial Intelligence (AI), Robotic Process Automation (RPA), and Blockchain are disrupting the accounting profession. This raises the question of whether the accounting profession will be fully automated by Artificial Intelligence or assisted by it. If the future is assistance from AI, accounting professionals, present and future, will need to know how to stay relevant in the changing times of accounting. What skills will accountants need to learn to not only keep employment but to progress in their careers?

To comprehend how these new technologies are affecting the accounting profession, it is important to understand how they function. The integration of these new technologies is having a greater impact on accounting than each one separately.

### Emerging Technologies

#### *Robotic Process Automation (RPA)*

RPA is a software program, or a bot programmed to do a workflow. Like a macro, RPA can be programmed, but it can also learn when to run while a macro cannot (Masters, 2014). RPA works by being overlaid on top of other software and can interact with it. Once the bot is programmed, repetitive workflows can be automated each time the bot is run (Adams, 2022). RPA falls into two types: attended and unattended. Attended records the actions on workflow and plays it back. Unattended waits for a certain trigger to begin a specified workflow (Microsoft). RPA is commonly used for internal performance reporting, purchase-to-pay, and record-to-report in accounting (Chukwuani & Egiyi, 2020, p 446).

Microsoft Power Automate is an example of an RPA tool that accountants can use to automate workflows. An accountant can use Power Automate to create a workflow to copy a process they would perform. This process, for example, can be automatically emailing team members when a file is uploaded to a SharePoint site.

#### *Artificial Intelligence (AI)*

AI is “intelligence—perceiving, synthesizing, and inferring information—demonstrated by machines” (Wikipedia, n.d.). This intelligence is achieved by a collection of various technologies combined. These technologies are expert systems, data mining, machine learning, speech and image recognition, and semantic analysis (Gotthardt, et al., 2020, p. 91).

Expert systems are a key component of AI technologies. An expert system is computer software that makes decisions comparable to what an expert in the subject would make. It has two parts, the knowledge base, and the inference engine. The knowledge base is where the AI gets its rules and facts from, and the inference engine uses these rules and facts to figure out new facts (Lin & Hazelbaker, 2019). Accountants can use AI’s knowledge base to quickly gather information on a topic they may not understand. The information in the AI knowledge would be entered by expert

accountants on the topic. The inference engine provides solutions to problems an accountant may have to make accountants more efficient in solving problems. This is done through forward chaining ("What can happen next?") and backward chaining ("Why did this happen?") (Bhat, 2023). The inference engine can provide insights into why revenues for restaurants may have declined in 2020 and predict what might happen to restaurants if revenues continue to drop.

AI can imitate the human brain with artificial neural networks. An artificial neural network is a collection of nodes that signal to each other, similar to how neurons work in the brain (Artificial neural network). Fuzzy Logic is another method that imitates human decision-making. When the AI uses fuzzy logic, it just needs to give an acceptable reason without it needing to be accurate (Gotthardt, et al., 2020, p. 91).

AI can assist with unstructured tasks through the use of machine learning. The AI is trained on the data and decisions it is presented. Machine learning training is based on mathematical models, data visualization, and pattern recognition. Machine learning is seen in revenue forecasting and customer behavior predictions (Zhang et al., 2020 p. 110462). To make predictions the AI uses data mining to discover patterns in the data to make prediction.

Another aspect of machine learning is Natural Language Processing (NLP), which involves analyzing text and unstructured data. Coupled with Optical Character Recognition (OCR), which allows handwriting and scanned documents to be converted into text that can be copied and searched. Accountants can use NLP and OCR to speed up the process of text extraction for documents. OCR captures the text, while NLP identifies the specific information to extract. Using NLP and OCR to extract text can be up to five times faster than manual entry (Mayer, Eßwein, Stritzel, & Quick, 2021). A thorough review of text extraction is necessary to check for errors, as low quality and handwriting in a physical document cannot be read effectively.

Natural language generation (NLG) is another AI technology that produces text or speech from structured data. NLG works with NLP to understand the request and provide an appropriate response. These AI technologies are seen in chatbots (Gotthardt, et al., 2020, p. 91). NLG can assist accountants in generating emails, correcting grammar, and rephrasing their messages effectively in emails.

Accountants will need to know how to talk to AI. The more details that are given to AI the better the result will be. With NLP and NLG accountants can tell AI to generate a memo for a client. OpenAI's ChatGPT is an example of using AI to write a memo either as a template or a complete memo. Examples of an audit report and a cost segregation study report created by ChatGPT are provided in the appendix. ( ChatGPT [Computer software], 2023).

The AI can generate a quick template for the memo. This type of AI can be used to save time on writing emails and other documentation that is delivered to clients. Accountants need to be aware of using AI-generated templates and check for errors and the validity of the information. For example, bonus depreciation at times is not always 100% (US Bank, 2023). Accounting firms may want to have their own AI similar to ChatGPT to protect confidential client information and pull data from the Provided by Client files for better results. ChatGPT warns users that sensitive information should not be entered into it.



AI can work together with another technology called blockchain to further change how accounting is done.

### *Blockchain*

Blockchain is an emerging technology that will impact the accounting profession. It is a distributed ledger that records a transaction once and shares it across the network, making it immutable and unable to be changed. The way blockchain works is that a transaction creates a block with data describing the asset. Each move or transfer of the asset creates a new block, which is then chained together with previous blocks. Once a block is created, it cannot be altered (IBM, n.d.).

One of the key benefits of blockchain is its immutability, while another is its consensus-based verification, which ensures the accuracy of the data in each block. Additionally, the decentralized nature of blockchain allows information to be more widely distributed. The blockchain is also encrypted with private and public keys, enabling users with either key to view the transaction data (Smith, 2018).

Blockchain, as a Distributed Ledger Technology, has the potential to change accounting from double to triple entry, where the third step is adding it to the blockchain. Having a triple-entry system with blockchain would give auditors the ability to audit in real-time, as client transactions are always shared between them (Wikiaccounting, n.d.).

Real-time auditing or continuous accounting will enable stakeholders to have customized reports with readily available data. In the traditional method, all stakeholders receive the same reports because of the periodic nature of financial reports. However, blockchain transactions eliminate the need for periodic reports as the data is verified by consensus on the network. With the help of AI and blockchain, continuous accounting will enable all stakeholders, financial and non-financial, to access the information they need. This shift will be important due to the growing significance of stakeholder and ESG (Environmental, Social, and Governance) reporting. (Smith, 2018).

Distributed ledgers, which are the same technology as blockchain, have advantages over traditional ledgers. They are automated, leave audit trails, and are more secure from cyber-attacks since all copies from each host of the blockchain need to be attacked for the cyber-attack to be successful (Majaski, 2021).

These are the technologies that will impact the future of accounting, changing what accountants do and creating a new way of accounting.

## **II. The Impact of Automation in Accounting.**

Emerging technology is changing the Accounting Profession in many ways. It is improving the way accounting tasks are being completed in terms of speed and accuracy. Accounting firms are adapting to these changes in the ways of hiring those outside of accounting degrees (Marr, 2017).

### What Technology Can and Can Not Improve on

#### *Automation*

The improvements made to automation are affecting accounting jobs. Bookkeeping is said to be done by robots instead of accountants. In audits, the accountant who does the cross-footing would be replaced by a robot (Chukwuani & Egiyi, 2020, p 446). Other tasks that are no longer done by accountants include auditing expense submissions, risk assessment, analytic calculations, bank reconciliation, and invoice categorization (Bernard, 2017).

One of the benefits of automation in accounting is the improved accuracy of accounting work. One reason for this is that properly set up RPA tools can reduce the input errors caused by human error.

The speed at which things are done in accounting will increase due to automation. Repetitive and time-consuming tasks can be automated with RPA. An example of this is an audit of loan testing transactions where the process can be automated with Microsoft Access SQL and RPA collecting audit data (Stobierski, 2020). RPA's need for structured data can potentially have the AICPA create new audit data standards to accommodate this (Cohen et al, 2019). Payroll can be automated using software where the bonus, taxes, and deductions are calculated for each employee (Robocorp, 2021).

RPA does have some drawbacks, such as the need for constant updates as software programs change over time. Scaling RPA can also lead to potential problems and require ongoing monitoring to prevent tasks from breaking. Additionally, RPA is limited to structured data and cannot handle unstructured tasks that require human decision-making. For unstructured data, emerging technologies like AI may be better suited to handle the complexity of the task (Gitlin, n.d.).

#### *AI*

One effect of AI in the accounting profession is its ability to reduce the number of jobs involving certain accounting tasks. As AI implementation rises in the accounting field, the need for many accountants will drop due to AI being able to take over lower-level repetitive tasks.

AI has the potential to analyze every transaction that occurs. Unlike auditors today who sort and filter transactions, AI can analyze 100% of transactions, providing a comprehensive dataset for more accurate decision-making during audits (Lin & Hazelbaker, 2019).

Another reason for AI's improvement in accounting is that it's taught through machine learning to understand accounting tasks like bookkeeping. AI cannot fall under the same pressures that cause humans to commit fraud or commit errors due to fatigue, further improving the accuracy of

reports (Stancheva-Todorova, 2018, p. 135). When duties cannot be segregated due to limited personnel, AI can settle bills and create trial balances, leaving the staff to review the AI's work (Zehong & Li, 2018). AI will handle the recording transactions duty, leaving authorization and custody to segregate.

One of the limitations of AI is that its output requires review for accuracy, as it is not infallible. How the AI is trained will influence its outcomes. If the individual responsible for training the AI has a bias, the AI will pick up on this bias. For instance, mortgage lending algorithms have been shown to exhibit racial bias, with AI systems rejecting Black applicants 80%, Hispanic applicants 40%, and Native American applicants 70% more often than white applicants. The issue with the AI in this case was that it demonstrated a racial bias, despite similar economic factors among applicants (Hale, 2021).

### *Blockchain*

Blockchain changes accounting by allowing auditors to monitor transactions in real time. As a distributed ledger, it eliminates the need for multiple databases for a single transaction and removes the need for transaction-level reconciliation. However, accounting data reconciliation still requires an auditor (Singer & Kusz, 2021).

Despite the potential benefits, blockchain utilization in the accounting profession remains limited due to the technology still being in its initial stages with no official guidance or regulation for accounting standards. Companies will need to invest in computing resources, create specialized roles, and train professionals to implement blockchain effectively (Wikiaccounting, n.d.).

As a result of the new technologies, CPA (Certified Public Accountant) firms are increasingly looking to hire non-accounting majors with expertise in STEM fields to help with the implementation and maintenance of these technologies.

### New Employment Opportunities for Nonaccountants

Emerging technology is leading CPA firms to seek out graduates from STEM fields to improve their technological capabilities. In 2017, one accounting firm had 25% of its entry-level hires from STEM fields (Lin & Hazelbaker, 2019). This number is steadily on the rise, and this percentage is steadily increasing. In 2018, it was 31% (Hinson, 2019, p. 5), and in 2020, 42.7% of new hires were non-accounting graduates (Taylor, 2021, p. 4).

As the percentage of non-accounting graduates increases, fewer accounting graduates are being hired. This trend suggests that having an accounting degree alone may not be sufficient in the future, and accountants may need to acquire skills in related fields of the nonmajor hires to stand out among other candidates, both accounting and non-accounting. Since 2007, non-accounting majors have comprised about 10% of new hires for CPA firms. In 2020, this number rose to 43% (Taylor, 2021).

CPA firms are not hiring these non-majors into specialized divisions within the firms. Instead, these new hires are being placed in various business units, such as Audit, Taxation, Information

Management and Technology Assurance, and Consulting, among others. Accounting hires are likely to work alongside them in these units.

What this hiring change means is that CPA firms are looking for people with diverse backgrounds to adjust to the changing landscape of the accounting profession. Since technology has influenced this change in hiring, does this change mean that accountants will no longer be needed as other majors and technology can do the same job?

### Replacing Or Assisting Accountants

#### *Replacing*

New Public Radio (NPR) has made a calculator with research from the University of Oxford that predicts that Accountants have a 95% chance to be replaced by automation. The consensus is that repetitive and process-driven jobs will no longer exist. These repetitive jobs will be replaced and leave accountants to work on emotional intelligence-based tasks, such as building rapport with clients. (Marr, 2017). Richard Anning, head of ICAEW's (Institute of Chartered Accountants in England and Wales) IT Faculty says that AI will handle process-driven tasks like bookkeeping and the accountants handle higher-value tasks. A KPMG partner, Shamus Rae, says that they have plans to hire more staff and look at AI as a need to rebalance the jobs they have (Griffin, 2019).

As technology improves, accountants will be taking on more strategic and management roles. Some of these roles would be financial management and data-driven decision-making. Data Analytics and programming may be a requirement by firms that integrate advanced technology such as AI in their firms (Zhang, Xiong, Xie, Fan, & Gu, 2020, pp. 110471,110473). Since accountants are changing their roles, AI and Automation will assist them.

#### *Assisting*

When the restructuring of accounting jobs happens, AI will be assisting accountants. From 2021 to 2031, accounting and auditor jobs are looking to increase by 6% (Bureau of Labor Statistics, U.S. Department of Labor, 2022) meaning that AI is not eliminating accounting jobs. The fact that AI is not decreasing accounting job growth may be due to its limitations.

AI has its limitations as it cannot provide a strategy. If AI becomes capable of providing a strategy based on the data it manages, ethical issues may arise. The AI can be trained to where it gives the best strategy that focuses on benefiting the company it was trained by regardless of the impact on the stakeholders involved (Mortensen, 2022).

AI learns based on the data provided to it. Ethical issues arise when client data is used for AI training without the client's knowledge. Another risk of AI is not knowing where it's getting its information from. If the AI learns from the wrong source, it can potentially lead to offensive responses to clients and damage to the firm's reputation (Deloitte, n.d.). These risks are why AI is not capable of replacing accountants in decision-making and relational tasks.

Accountants no longer have to do the grunt work, which means that they will focus on the client even more. Client services are expected to be more customized to the client's needs as accountants have more time to build relationships. Customer service will be a major focus for accounting firms as accounting shifts towards advisory services (Horn, 2021). Some of these advisory services would be providing financial intelligence, budget planning, and compliance monitoring, where the accountant analyzes the AI-generated data to advise the client on the mentioned services (Higgin, 2021).

Accountants' daily tasks would change. They would feed data to the AI assistant the firms use to generate data. The accountant would review the work and create a visual analysis for the client. The accountant may send it to management to review their visualization, so it covers the points they need to advise the client effectively. Management may have staff create data sets so management can create visualizations if they are the ones talking to the client. Another task may involve setting up the AI to have access to the client transactions through their ERP (Enterprise Resource Planning) or blockchain ledger. This allows auditors to have Real-time access to the client's data. The auditor will monitor the AI assistant to look for certain anomalies in the transaction data. A tax accountant working on a cost segregation project can have a trained AI assistant to look at blueprints and general contractor pay apps to extract the items that can be depreciated faster than the building. The tax accountant would create a summary, telling the client how much their NPV (Net Present Value) will increase that initial year due to the study.

Automation is only able to assist accountants. RPA needs to be programmed for it to work autonomously. RPA tasks still need the accountants to do something to trigger the workflow. An example is having a workflow where when a file is uploaded to Microsoft SharePoint the RPA program, Microsoft Power Automate, will automatically check it in. SharePoint by default leaves newly uploaded files checked in to the user so others cannot see it until they check it in. While RPA can be scheduled, it relies on all software involved not changing for it to consistently complete the workflow without error.

Since technology has a learning curve and will take time to implement, accountants will need to improve their skills to adapt to the changes.

### **III. Skills Needed for the Future of Accounting**

Technological advances have changed what is expected of accountants. Accounting is changing from bookkeeping to more of an advisory role due to AI and automation being able to take care of the grunt work.

#### Skills Required for Accountants

##### *Communication*

Communication will be a necessity for accountants as AI allows accountants to focus more on their clients. Having effective communication skills will be valuable because AI will not replace

human interactions with clients. As an accountant progresses to higher positions most of their communication will be with stakeholders and colleagues (Gallagher, 2022).

Part of effective communication is the ability to tell stories. It is one of the recommended skills for academic institutions to focus on when teaching students (Sarkar, Gray, Boss, & Daly, 2021). With the help of AI providing more data, accountants will still need to present the data in a meaningful way to clients. Accountants will need to be proficient in data visualization to effectively present their stories.

### *Strategic Thinking*

Strategic thinking skills are important to develop. Strategic thinking encompasses the skills of analytical, communication, problem-solving, and planning and management for the future (Stobierski, 2020). Accounting is becoming more about strategic planning as AI handles the lower-level tasks of data management. Accountants will need these skills to use AI-generated data to make plans and solve problems with the data given to them. Strategic thinking skills can be improved by asking strategic questions, considering other perspectives, observing, and reflecting on the trends that are happening, and considering alternative options (Indeed Editorial Team, 2022).

### *Data Analytics*

Data analytics skills will be important in the AI age of accounting. AI will handle data preparation, but accountants need to analyze the data and come up with a narrative. For example, an accountant may have sales data and they will need to analyze what it means and why it is trending in a certain way.

Data preparation is a necessary skill. AI works on the data it is fed, and not all data will be optimized for AI since clients have their methods of recordkeeping. An accountant will need to know how to cleanse data for the AI so that it can provide better results from the data analysis. If the data presented by the AI is not correct, then the accountant reviewing the AI's work will need to fix it manually. Having strong data analytics and data preparation skills will affect how efficiently an accountant can review and fix the data.

As accountants move into higher positions there is a change in the skills that are prioritized in the position.

### Skill Usage between Staff and Management

As accountants move up in their careers their skill set will need to adjust to their current position. Some skills at the entry-level will not be as relevant in the management position. This trend is current with the changes in the accounting profession.

Elizabeth Felski was able to send a survey to 200 auditors in Staff/Senior, Management, and Director/Partner positions with a 28% response rate in several types of firms and sizes (Felski, 2023). Some key figures were that Excel is required with a 100% regular usage rate. Other

software that was more common are Idea/ACL 31%, PowerBI 21%, and Tableau 17% but on Occasionally usage. Auditors hardly use Access as 2% use it on an occasional basis in Auditing.

The survey conducted by Elizabeth Felski revealed some interesting findings regarding the differences in skill usage between entry-level and management-level auditors. The study found that data cleaning and preparation was a skill used more frequently by entry-level auditors, with 91% reporting regular usage, compared to only 31% of management-level auditors. On the other hand, the use of visualization tools was higher in management, with 71% regularly using these tools compared to 43% of entry-level auditors. Overall, both staff and management need to be proficient in data analytics and understand how the software outputs the data to be effective in their roles.

From the responses gathered from the survey data, accountants must understand how the data works as it is important through entry and management levels. Seeing a decline in data cleansing and preparation at management levels shows that AI will manage that process as it is seen as a lower-level task. Once accountants receive the data, they will need to focus on how to tell a story with it as communication is important in management-level roles. Some similarities to the survey can be seen in job postings.

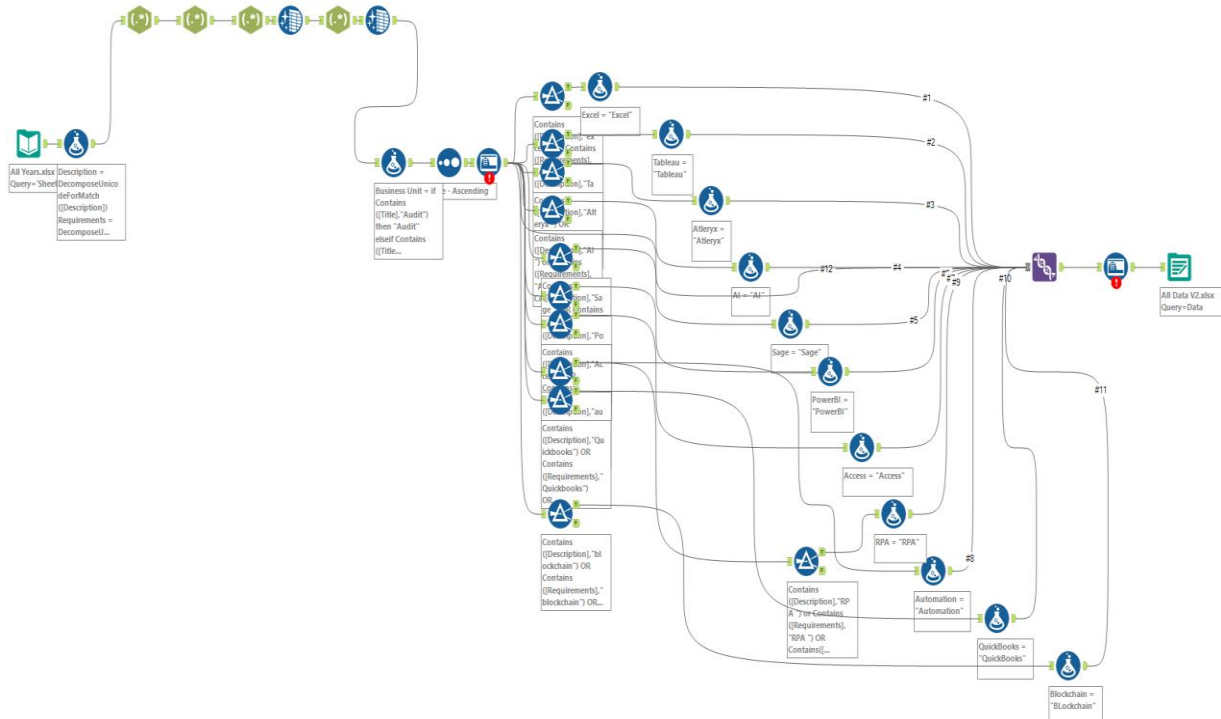
### Job Analysis of Required Software Skills

Taking the software for Felski's survey to create a basis for software skills required in accounting with changes in the selected software. The data comes from a job posting from Robert Half from 2019 – 2022 in August for each year. The total number of jobs analyzed is 14,996.

#### *Job Data Preparation*

The data was prepped in Excel by adding a year column to the corresponding files. The data was combined in Alteryx to make one file. Then in Excel, each job was given a unique Job ID. The file was cleaned and analyzed in Alteryx creating a formula that finds “software ” in the description or the requirements field for each job posting. Figure 1 shows the Alteryx workflow of the combined file. The Alteryx formula filters for the word if it appears once in either description or requirements column. The space after the software is so the formula would not confuse “Excel” with “excellence” for example. Once each software was filtered, a column was added to the dataset. After that, all the data was appended, and all the software was in different columns. The unfiltered data was a part of the appending process to include jobs without any software requirements. After creating an Excel file with the data, the duplicates were removed from the Excel sheet. Abelbits merge duplicates add-in was used to combine all job ID duplicates into one line. This is due to some Job IDs having one software on one line and one on another line.

Figure 1 Alteryx Workflow



**Job Data Results**

There have been increasing technology skills required in accounting jobs throughout 2019 -2022 shown in Table 1. Since most of these technologies, AI, RPA, Blockchain, and Alteryx, have extremely low percentages they will be removed from further analysis.

Table 1 Number of Jobs Requiring Software Skills

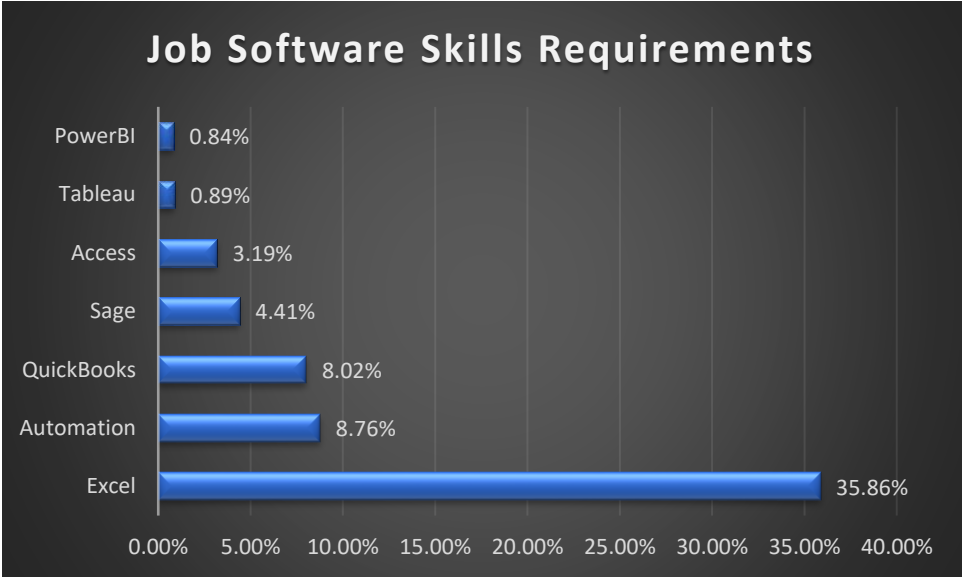
Technology	2019	2020	2021	2022
<b>Excel</b>	38.30%	33.03%	34.76%	36.18%
<b>QuickBooks</b>	8.78%	9.79%	7.65%	7.14%
<b>Blockchain</b>	0.00%	0.27%	0.02%	0.00%
<b>Tableau</b>	0.87%	0.48%	0.94%	1.02%
<b>Alteryx</b>	0.00%	0.05%	0.13%	0.16%
<b>AI</b>	0.17%	0.05%	0.00%	0.18%
<b>Sage</b>	2.85%	3.66%	4.21%	6.00%
<b>PowerBI</b>	0.17%	0.43%	1.21%	1.14%
<b>Access</b>	2.85%	3.12%	3.07%	3.56%
<b>Automation</b>	7.60%	7.91%	7.92%	10.68%
<b>RPA</b>	0.00%	0.05%	0.09%	0.04%
<b>Job Total</b>	3577	1859	4560	5000



Outside of the decrease in jobs in 2020, most of the technologies listed in Felski’s survey have seen a rise in the number of jobs asking for that skill. PowerBI and automation have seen a lot of relative growth throughout this time.

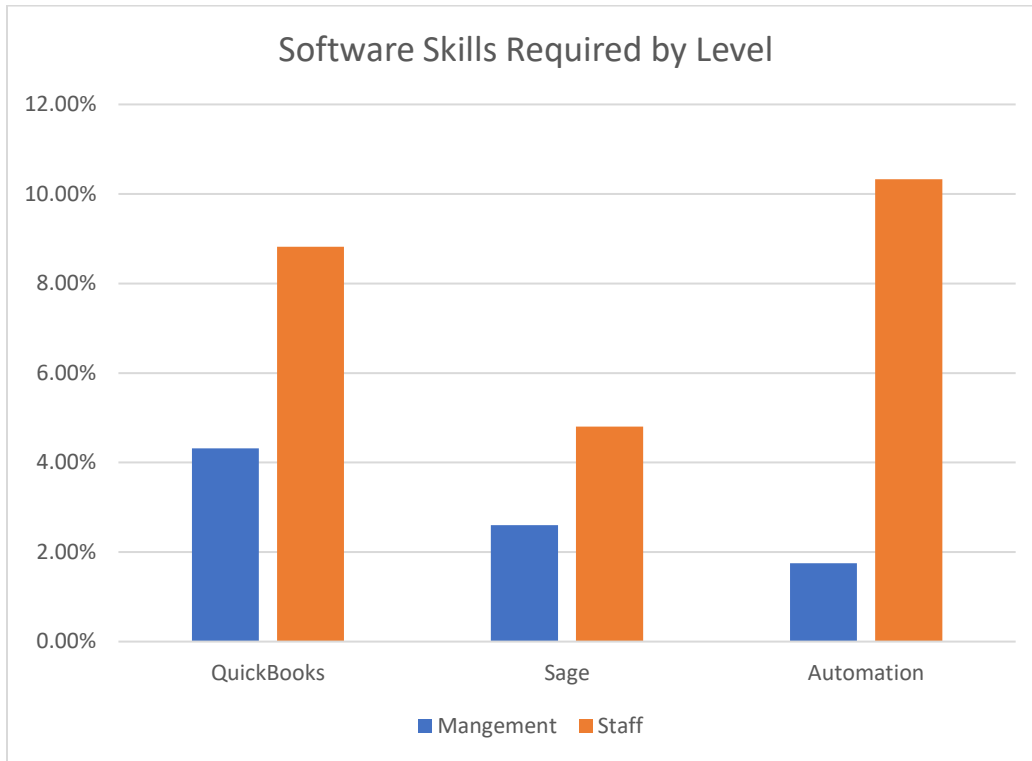
The data gathered shown in Figure 2 shows that 36% percent of the jobs had Excel as a requirement to know. This statistic means that Excel is essential to the accounting profession. Other software was not mentioned in as many job applications, some none. Automation was a skill listed and it was mentioned in 8.76% of the jobs.

Figure 2 Job Software Skills Requirements



Comparing the software requirements between Staff and Management there is a trend that management is not required to know how to use other data entry software outside of Excel as much as the staff. Figure 3 shows that the higher amount of automation required at the staff level can mean that RPA technology will be implemented and monitored more at the staff level than at the management level.

Figure 3 Software Skill Required by Level



Figures 4.1 and 4.2 compare management and staff job requirements for QuickBooks, Sage, and Automation. The figures show that QuickBooks is on the decline and automation is on the rise. Automation rose more at the staff level, showing that understanding automation is more of a lower-level task.

Figure 4.1 Management Software Skill Requirements

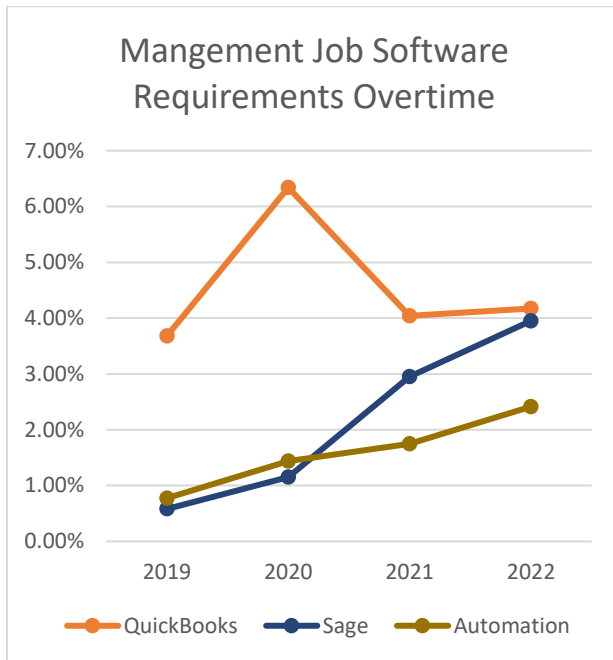
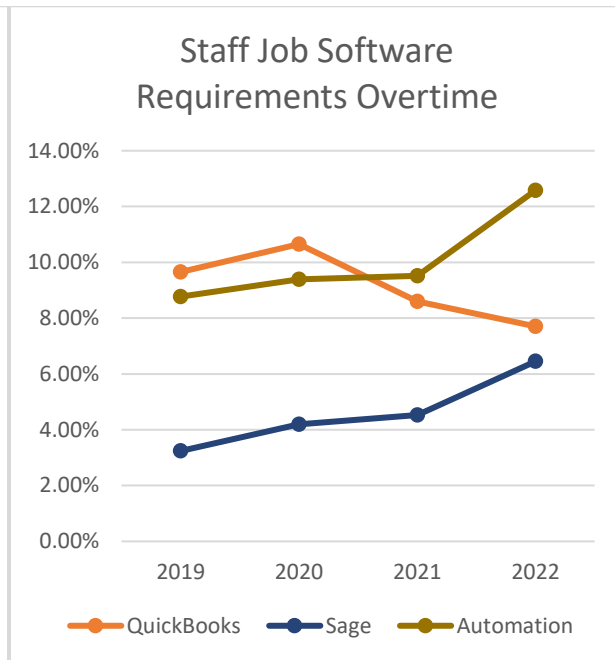


Figure 4.2 Staff Software Skill Requirements



#### IV. Conclusion

The accounting profession is being impacted by changes in technology, with major innovations such as AI, RPA, and blockchain disrupting the industry. These emerging technologies are eliminating repetitive jobs and creating roles that focus on decision-making and management. As a result, accountants must be skilled in data analytics while still being knowledgeable about accounting tasks that will be automated. The integration of innovative technology is enabling accounting to become real-time and catered to stakeholders.

Accountants are not being replaced, but rather displaced, as technology continues to improve and handle various repetitive tasks previously performed by accountants. These emerging technologies will provide quicker data analytics, allowing accountants to shift their focus to advisory and management roles. To excel in these roles, accountants must possess excellent communication and storytelling abilities, as the human element remains critical in client interactions.

#### Appendix

##### ChatGPT Audit Report

generate an audit report for boulder industries' year-end report for 2022. They made \$15M and we tested the sales journal for any unusual transactions. The audit was from 1/1/23 to 3/15/23. We conclude that there are some transactions at the end of each month to a company not found in

Boulder's client database, called Pebble Co. These transactions cause a significant misstatement in the revenue made by Boulder. We have to give a qualified opinion.

#### Audit Report for Boulder Industries Year-End Report for 2022

**Introduction** We have completed our audit of Boulder Industries' year-end report for the fiscal year ended December 31, 2022. The purpose of our audit was to express an opinion on the financial statements prepared by management. We conducted the audit in accordance with auditing standards generally accepted in the United States of America.

**Scope** Our audit was conducted from January 1, 2023, to March 15, 2023. Our audit was designed to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement. Our audit procedures included, but were not limited to, examining evidence supporting the amounts and disclosures in the financial statements. We also evaluated the accounting principles used and significant estimates made by management.

**Opinion** Based on our audit, we are unable to express an unqualified opinion on the financial statements of Boulder Industries as of December 31, 2022. The transactions at the end of each month to Pebble Co. cause a significant misstatement in the revenue made by Boulder Industries. In our opinion, the financial statements do not present fairly, in all material respects, the financial position of Boulder Industries as of December 31, 2022, and the results of its operations and its cash flows for the year then ended, in accordance with accounting principles generally accepted in the United States of America.

**Basis for Qualified Opinion** During our audit, we tested the sales journal for any unusual transactions. We found that there were transactions at the end of each month to a company called Pebble Co. that is not found in Boulder's client database. These transactions were not properly supported by documentation and we were unable to obtain sufficient evidence to determine whether these transactions were recorded accurately in the financial statements. We also found that these transactions cause a significant misstatement in the revenue made by Boulder Industries.

**Management's Response** We discussed our findings with management and they were unable to provide sufficient information regarding these transactions. Management has indicated that they will conduct further investigation to determine the nature of these transactions and provide additional information to us.

**Conclusion** In conclusion, based on our audit, we are unable to express an unqualified opinion on the financial statements of Boulder Industries as of December 31, 2022. The transactions at the end of each month to Pebble Co. cause a significant misstatement in the revenue made by Boulder Industries. Therefore, we are of the opinion that the financial statements do not present fairly, in all material respects, the financial position of Boulder Industries as of December 31, 2022, and the results of its operations and its cash flows for the year then ended, except for the effects of the matter described in the Basis for Qualified Opinion section of our report.

Respectfully submitted,

[Your Name] [Your Title] [Your Firm's Name]

Write a cost segregation study on how we save the client \$500,000 in bonus depreciation by separating out their improvement from the building depreciation. Include items are land improvements, accessorial electrical, and accessorial mechanical improvements from the client's renovation.

## Cost Segregation Study Report

Client: [Company Name]

Project: Renovation of [Building Name]

### Purpose:

This cost segregation study was conducted to identify the components of the renovation project that can be classified as shorter life assets and depreciated over a shorter period of time, rather than being depreciated over the standard 27.5-year or 39-year period for buildings. By identifying these assets and applying bonus depreciation, the client can save on taxes and increase cash flow.

### Methodology:

Our team conducted a thorough review of the renovation project, including invoices, contracts, and other relevant documents. We also conducted a site visit to visually inspect the assets and their placement within the building.

Results: Based on our analysis, we have identified the following assets as shorter life assets eligible for bonus depreciation:

### Land Improvements:

- Site work and grading
- Landscaping and irrigation
- Parking lot and driveway improvements
- Fencing and gates

### Accessorial Electrical Improvements:

- Electrical panel upgrades
- Lighting upgrades
- Power outlets and wiring upgrades
- Security system improvements

### Accessorial Mechanical Improvements:

- HVAC upgrades and repairs
- Plumbing upgrades and repairs
- Fire suppression system upgrades
- Elevator upgrades and repairs

These assets were identified as separate from the building and can be depreciated over a shorter period of time, resulting in significant tax savings. By segregating these assets,

the client is eligible for \$500,000 in bonus depreciation, resulting in a tax savings of approximately \$150,000 in the first year.

**Conclusion:**

Our cost segregation study has identified a significant opportunity for tax savings for [Company Name] through the identification and segregation of shorter life assets from the renovation project. We recommend that the client take advantage of this opportunity to maximize their tax savings and improve their cash flow. We are available to answer any questions or provide additional guidance on how to implement this cost segregation study.

Sincerely,  
[Your Name]

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